



FORT KNOX ENVIRONMENTAL HANDBOOK



ENVIRONMENTAL MANAGEMENT DIVISION



Issue 016 Ver. 01

Fort Knox Environmental Handbook
Published by the Fort Knox Environmental Division
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<http://www.knox.army.mil/Garrison/dpw/emd/Default.aspx>

EMD Information emails:

Army.Knox.EMD@Mail.mil

This handbook is applicable to all major commands, directorates, tenants, satellite activities and contractors stationed, operating, training, or assigned to Fort Knox.

TABLE OF CONTENTS

SECTION 1

Fort Knox Environmental Policy Memo -----	iv
Preface-----	1
Regulatory References -----	2

SECTION 2 – EMERGENCY INFORMATION -----3

Emergency Phone Numbers -----	3
Environmental Points of Contact (POC) -----	4

SECTION 3 – RESPONSIBILITIES-UNITS, EOs, OTHERS

Tenants, Units and Contractors -----	5
Environmental Officers (EO) Training -----	6
Sample Orders for Appointment of EOs -----	7
Unit/Activities/Organizations and Contractors Responsibilities -----	8

SECTION 4 – OPERATIONAL CONTROLS “How to Pages” ----- 10

Absorbents (Used for POL) -----	11
Adhesives and Sealants -----	12
Aerosol Cans -----	13
Asbestos (Building Renovation/Maintenance/Demolition) -----	14
Asbestos (Disposal of Unserviceable Brake Shoes) -----	15
Ballasts, Capacitors, and Other Equipment Containing PCBs -----	16
Batteries (Lead-Acid) (Military Vehicles) -----	17
Batteries (Non-Lead-Acid) (Universal Waste) -----	18
Bulk Storage Containers (BSCs) -----	19
CBRNE (Detector/DECON Kits) -----	20
CBRNE (Protective Mask Filters) -----	21
Chemicals (EPCRA) -----	22
Chemical Agent Resistant Coating (CARC) Painting -----	23
Construction/Demolition Debris (CD/D)-----	24
Dig Permit/Utility Locate (Cantonment and Training Areas) -----	25
Drip Pads-----	26
Filters-POL-----	27
Flameless Ration Heaters (FRH) -----	28
Fluorescent Tubes and Mercury Containing Lamps -----	29
Fuels (Purged or Contaminated) -----	30
Gas Cylinders (Compressed) (Oxygen, Acetylene, Argon, Nitrogen, Propane, etc.) ----	30
Gas Cylinders (Disposable) -----	32
Gray Water-----	33
Grease (Maintenance) -----	34
Hazardous Materials (Inventory Procedures)-----	35

ENVIRONMENTAL HANDBOOK Issue 016 Ver. 01

Hazardous Materials (Storage Procedures) -----	36
Lead Containing Painting (Surface Preparation-Renovation) -----	37
Mold -----	38
Natural Resources-----	39
Oil Water Separator (OWS) -----	40
Ozone Depleting Substances (ODS) -----	41
Paint & Paint-Related Material (Oil-based paint and Stain; Latex (Water-based paint and Stain) -----	42
Parts Washers/Weapons Cleaner/Solvent Tank/Degreasers -----	43
Pesticides, Herbicides, Rodenticides-----	44
Pressure Cleaning and Parts Washing -----	45
Rags -----	46
Range/Field Practices -----	47
Satellite Accumulation Point (SAP) Universal Waste Collection Area (UWCA) -----	48
Self Help (Repair & Utilities - R & U) -----	49
Stormwater Best Management Practices (BMPs) Construction Sites -----	50
Solid Waste CD/D Landfill -----	51
Spill Response Materials-----	52
Tires -----	54
Wash Rack -----	55
Water Purification Operations -----	56
Weapons Cleaning Materials-----	57

SECTION 5 - APPENDICES

Appendix A - Air-----	58
Appendix B - Bulk Storage Containers (BSCs) & Spill Prevention Control and Countermeasures Plan (SPCCP)-----	59
Appendix C - Cultural Resources -----	65
Appendix D - Environmental Compliance Forms-----	66
Appendix E - Environmental Management System (EMS)/Sustainability -----	81
Appendix F - Hazardous Materials Management & Minimization -----	83
Appendix G - Hazardous/Universal Waste Guidance -----	88
Appendix H - National Environmental Policy Act (NEPA)-----	95
Appendix I - Natural Resources -----	98
Appendix J - Noise -----	102
Appendix K - Pollution Prevention & Green Procurement-----	103
Appendix L - Recycling Center (QRP Program) -----	108
Appendix M- Spill Prevention and Emergency Response Procedures -----	114
Appendix N - Storm Water/Ground Water Pollution Prevention/Best Management Practices Plan (SWGPP/BMP) -----	118
Appendix O - Solid Waste Management-----	123
Appendix P - Work/Service Orders-----	126
Appendix Q – Acronyms -----	127

Section I



REPLY TO
ATTENTION OF:

IMKN-PWE

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
111E CHAFFEE AVENUE
FORT KNOX, KENTUCKY 40121-5256

NOV 20 2015

MEMORANDUM FOR

Commanders, All Units Reporting Directly to This Headquarters
Commanders, Fort Knox Partners in Excellence
Directors and Chiefs, Staff Offices/Departments, This Headquarters

SUBJECT: Fort Knox Policy Memo No. 13 – Environmental Policy

1. PURPOSE: To define the Fort Knox Environmental Policy.
2. APPLICABILITY: This policy applies to all personnel performing work for or on behalf of Fort Knox, including Soldiers, Civilians and contractors.
3. POLICY:
 - a. In accordance with Executive Orders 13514 and 13693, Fort Knox has an Environmental Management System (EMS) that conforms to the International Organization for Standardization (ISO) 14001. Although this is a federal mandate, I believe it has always been in the Army's best interest to protect our natural resources. I am thus committed to managing our environment through leadership involvement. In all that we do, we will do it right. The management practices we implement now will facilitate our ability to fight and win wars today, without compromising the ability of future generations of Soldiers to do the same. The Environmental Management Division has created the Fort Knox Environmental Handbook to provide you with guidance for compliance with this Environmental Policy.
 - b. It is the inherent responsibility of all personnel to protect and preserve the environment.
 - c. I support involved leaders who set objectives and targets to monitor activities for continual improvement of environmental stewardship and pollution prevention. They are the foundation that will minimize the installation's environmental footprint.
 - d. Our commitment to comply with all legal requirements is considered the minimum standard. We must strive for performance beyond compliance in all our operations. It is our responsibility to ensure we are using our natural resources in a manner that provides a clean, healthy, and safe environment today and in the future.
4. The proponent for this policy is the Directorate of Public Works Environmental Management Division at (502) 624-3629.

COL. AG
Commanding

PREFACE

Over the years, federal environmental regulations have complicated many of the routine activities that are performed on this installation on a daily basis. These environmental regulations have a significant impact on the way that these "routine activities" are performed. To understand all the requirements from all the regulations would be a monumental undertaking. Environmental stewardship is equally important in both the tactical and Garrison environments. Prevention of pollution, corrective actions and continual improvements are the goals to achieve a sustainable installation. Executive Order (EO) 13148, Greening the Government through Leadership in Environmental Management (21 April 2000), mandates that the installation aligns with the ISO 14001 standard. EO 13423, Strengthening Federal Environmental, Energy, and Transportation Management (24 January 2007) mandates that the installation incorporate the federal sustainability objectives and targets into the Fort Knox environmental program. Finally, EO 13693, Federal Leadership in Environmental, Energy, and Economic Performance (October 2009) expands on the energy reduction and environmental performance requirements for Federal agencies identified in EO 13423. The goal of EO 13693 is "to establish an integrated strategy towards sustainability in the Federal Government and to make reduction of Greenhouse Gas Emissions (GHG) a priority for Federal agencies."

The Fort Knox Handbook, Issue 16 - Version I, replaces all previous editions of the Environmental Handbook and incorporates the latest changes in environmental regulations and Fort Knox policies. The Fort Knox Environmental Handbook applies to all units (military), tenants, activities, contractors, and Partners in Excellence. Please note the new handbook format using "How to Pages" in the Section Titled "Operational Controls". Operational Controls represent the Best Management Practices (BMPs) for all environmental programs at Fort Knox.

REGULATORY REFERENCES

The Fort Knox Environmental Handbook has incorporated the following:

- 32 Code of Federal Regulations (CFR) Part 651
- ALARACT 031/2012 – Army Fire Suppression and Environmental Control System Policy and Procedures
- AR 200-1, Environmental Protection and Enhancement, 13 December 2007
- AR 210-190, Post Cemeteries, 16 February 2005
- AR 350-19, The Army Sustainable Range Program, 30 August 2005
- AR 710-2 Supply Policy
- ATP 3-34.5 Environmental Considerations, August 2015
- ATP 4-45, Force Provider Operations
- Clean Air Act (CAA)
- Clean Water Act (CWA)
- DA Pam 710-7
- Environmental Management Division Contract Specifications
- Environmental Management System (EMS) Procedures
- Executive Order 13693, Federal Leadership in Environmental, Energy, and Economic Performance, 5 October 2009
- Fort Knox Regulation 200-3, Fort Knox Hunting and Fishing Regulations and Procedures, 13 Nov 2009
- Fort Knox Regulation 385-10, The Fort Knox Safety Program, 20 July 2009
- Kentucky Division for Air Quality Regulations
- Kentucky Division of Waste Management Regulations
- Kentucky Division of Water Regulations
- Resource Conservation and Recovery Act (RCRA)
- TC 25-1, Training Land, 15 March 2004
- TC 3-34.489, “The Soldier and the Environment”, 8 May 2001

SECTION 2 – EMERGENCY INFORMATION

Emergency Phone Numbers (Health and Safety)

Ambulance -----	911
Emergency -----	911
Fire Department, LEC -----	502-624-6016/1876
Military Police (MP) -----	502-624-2111
Range Emergency/Spills -----	502-624-2125

Emergency Phone Numbers (Environmental)

Air and Noise -----	502-624-8263
Asbestos Abatement-----	502-624-3598/5245
Bulk Storage Containers (BSCs) (ASTs) & -----	502-624-2072
Underground Storage Tanks (USTs) -----	502-624-8537
Compliance Branch -----	502-624-8672
Cultural Resources Branch-----	502-624-6581
Drinking Water -----	502-624-2072
Environmental Management Division -----	502-624-3629-4654
Fish and Wildlife/Hunt Control -----	502-624-7373
Forestry -----	502-624-5070
Hazardous Materials Control Center (HMCC) -----	502-624-4275/5101
Hazardous/Universal Waste Disposal-----	502-624-8379/6598
Lead Paint Abatement-----	502-624-3598/5245
Pollution Prevention -----	502-624-8672/6057
Range Control-----	502-624-2125/2135
Restoration-----	502-624-8537
Staff Duty Officer- -----	502-624-4421
Storm Water/Groundwater -----	502-624-8187
Waste Water (Grey Water) -----	502-624-3692/8187
Wastewater Treatment Plant -----	502-942-6020
Work/Service Orders -----	502-624-1171
Work Order Email -- usarmy.knox.imcom-atlantic.mbx.dpw-work-orders@mail.mil	

POST THIS PAGE FOR QUICK ACCESS

Environmental Points of Contact

<u>Environmental Management Division</u>	<u>Contact Numbers</u>
Asbestos	502-624-3598/5245
Bulk Storage Containers (BSCs)/(ASTs)	502-624-2072
Clean Air Act /Air Pollution/CFC	502-624-8263
Clean Water Act/Storm Water	502-624-8187
Compliance Inspections	502-624-2186/8811
Cultural Resources	502-624-6581
Drinking Water Operations	502-942-5008
Drinking Water Program	502-624-2072
Emergency Planning and Community Right-to-Know Act (EPCRA) (Hazardous Materials)	502-624-3598
Endangered Species	502-624-7373
Environmental Management System (EMS), Green Procurement Program, and Pollution Prevention (P2)	502-624-8672/6057
Environmental Training	502-624-3598/6057
Forestry	502-624-5070
Hazardous/Universal Waste	502-624-8379/6598
Lead Based Paint	502-624-3598/5245
Mold	502-624-3598/5245
Natural Resources	502-624-7368
NEPA	502-624-5174
Noise	502-624-8263
Pollution Prevention (P2)	502-624-8672/6057
Qualified Recycle Program (QRP)	502-624-5026
Restoration Program (Land Management)	502-624-8537
Solid Waste Management	502-624-3692
Spill Control and Countermeasure Program (SPCCP)	502-624-8187/6057
Tree Cutting	502-624-5070
Used Oil and Antifreeze	502-624-5026
Wastewater Treatment Operations	502-926-6020
Wetlands	502-624-7368
Wildlife Biologist	502-624-7373

SECTION 3 – RESPONSIBILITIES-UNITS, EOs, OTHERS

TENANTS, UNITS, AND CONTRACTORS

A tenant is an authorized activity located on an installation that is not part of the Garrison organization. This includes, but is not limited to, military units, the Army and Air Force Exchange Service (AAFES), and the Defense Commissary Agency (DeCA), and contractors with activities on post. Tenants will:

- a) Comply with installation policies, applicable Federal, State, and local environmental laws, regulations, EOs, and overseas FGS.
- b) Participate in the installation’s planning, sustainability, and EMS (note, however, that installations should evaluate their liabilities concerning non-governmental tenants to determine whether any of them can be exempted from the installation EMS).
- c) Designate a representative to the EQCC (Commander or Senior Level Civilian).
- d) Ensure personnel receive required environmental training.
- e) Participate in all installation internal and external assessments and audits, to include programming for corrective actions.
- f) Identify and coordinate non mission-specific environmental requirements with the GC.
- g) Pay environmental fines and penalties resulting from their mission activities.
- h) Immediately report spills or releases of hazardous substances to the On-Scene Coordinator (OSC). Pay or reimburse costs associated with cleanup and spill response if not covered in the standard installations services or the Installation Services Support Agreement (ISSA).
- i) Report all instances of non-compliance and notification of enforcement actions to the GC immediately.
- j) Ensure that non-DOD hazardous material is not stored, treated, or disposed of on the installation unless approved by the Office of the Assistant Secretary of the Army –Installations & Environment (OASA (I&E), his or her designee, or higher authority).

UNIT COMMANDERS

The commander's role in environmental sustainment centers on building environmental ethics in personnel by training and counseling them on environmental stewardship and sustainability, leading by example, and enforcing compliance with laws and regulations.

The commander—

- Communicates environmental ethics to assigned personnel while training them to be good environmental stewards.
- Develops and sustains a positive and proactive commitment to environmental protection.
- Protects the environment during training and other activities.
- Trains peers and subordinates to identify the environmental effects of plans, actions, and operations in relation to the mission, environment, community, and fiscal resources.
- Trains personnel on the importance of protecting the environment and the possible consequences of noncompliance and non-sustainable practices.
- Understands the links between environmental considerations and the associated impacts on Force Health Protection (FHP), safety, and other protection aspects.
- Oversees the environmental officer’s performance.

- Appoint and train environmental officers at appropriate organizational levels to ensure compliance actions take place (see ATP 3-34.5, August 2015, for Environmental Officer Responsibilities).
- Support the installation-wide EMS.

ENVIRONMENTAL QUALITY CONTROL COMMITTEE (EQCC)

- a) Installations will establish Environmental Quality Control Committees (EQCCs) chaired by the Garrison Commander (GC). The EQCC will include major and sub-installations tenant activities, and contractors. EQCCs will meet at least quarterly and document /decisions.
- b) The EQCC should consist of members representing the operational, logistics, engineering, planning, resource management, legal, medical, environmental, Morale, Welfare, and Recreation (MWR), commissary, exchange service, and safety interests of the command, including military installation tenant activities, and contractors.
- c) The EQCC will help to plan, execute, and monitor actions and programs with environmental implications. The committee will identify issues, make recommendations, and advise the GC.

Environmental Officer (EO)

Training

Environmental Officer (EO) Training is conducted by the Environmental Management Division (EMD). AR 200-1 and ATP 3-34.5 requires trained and appointed Environmental Officers from all activities on the installation. EMD prefers to have a Primary and an Alternate Officer for each activity. An EO should be available for a 12 month tenure on Fort Knox. The initial course is 3 days and required once. A 1 day Re-Certification course is required every year after successful completion of the 3 day course. A certificate and ID card will be issued upon completion of the EO training. Course dates will be posted on the EMD webpage.

Course Topics:

Topics covered may vary from time to time, based on regulatory changes or compliance issues. Generally, a standard agenda would include, but is not limited to, the following:

Air Programs, Asbestos & Lead, Bulk Storage Containers, Compliance Inspections, Cultural Resources, EMS, EPCRA, General Information, Green Procurement, Hazardous Materials, Hazardous/Universal Wastes, Natural Resources, Operational Controls, Pollution Prevention, Recycling, Regulatory Changes, Spill Response, Storm Water, and other subjects as needed.

A competency test is given at the end of each course to ensure personnel are competent in the material covered. A passing score of 70% is required.

Course Registration

You may register for courses by contacting the Environmental Training Officer at 502-624-3598, or sending an e-mail to: Army.Knox.EMD@Mail.mil, requesting a registration form. Return the completed registration form as an Excel file and include a copy of your appointment orders. All classes are limited to 30 students.

Sample Orders for Appointment of EOs



DEPARTMENT OF THE ARMY
ORGANIZATIONAL NAME/TITLE
STANDARDIZED STREET ADDRESS
CITY, STATE, AND ZIP + 4 CODE

REPLY TO
ATTENTION OF

OFFICE SYMBOL

Date

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Appointment of Environmental Officers

1. References: AR 200-1, Environmental Protection and Enhancement, 13 December 2007, ATP 3-34.5, Environmental Considerations, August 2015.
2. Effective immediately, the following individual(s) is/are appointed as the Environmental Officer(s) for **(YOUR UNIT)**.
 - a. PRIMARY – Name, Rank/Grade, Phone number and E-mail address
 - b. ALTERNATE – Name, Rank/Grade, Phone number and E-mail address.
3. Period: One year from the date of this memorandum or unless officially relieved from appointment or reassignment.
4. Special Instructions:
 - a. Individual serves as the primary liaison to the Environmental Management Division as outlined in the references above.
 - b. The Environmental Officer(s) listed above is responsible for complying with the duties outlined in the references above.

Signature Block of the
Commanding Officer or Supervisor

DISTRIBUTION:
Individual(s)
Organization/Activity Training Officer

Unit/Activity/Tenant/Contractor Responsibilities

AR200-1

To ensure compliance with Army regulations and federal, state and local regulations, each Unit/Activity/Tenant/Contractor is responsible for the following:

AR200-1 mandates EOs be appointed and on orders.

Appointment Orders - Appointing on orders a primary and alternate Unit Environmental Officer (EO) for all company level and above units. A copy of all appointment orders will be sent to EMD via this email: Army.Knox.EMD@Mail.mil

Environmental Duties/Positions - The EO for each Unit/Activity/Tenant/Contractor is responsible for all environmental duties/positions. The EO is responsible for maintaining copies of training records in the Units/Activities/Tenants/Contractors records.

EQCS Meetings - The EO or alternate is required to attend the monthly Environmental Quality Control Subcommittee (EQCS) meetings. Meetings are scheduled for the third Wednesday of each month at 0930 hours.

Facilities Inspections - Units/Activities/Tenants/Contractors are responsible for inspections of facilities under their operational control to ensure compliance with environmental laws, regulations, and the Fort Knox Environmental Handbook. Inspections must be completed In Accordance With (IAW) guidance on inspection forms. Inspection reports will be kept on file by the Units/Activities/Tenants/Contractors and will be available for subsequent inspections.

Hazardous Waste Management Plan- The Unit/Activity/Tenant/Contractor will comply with the Fort Knox Hazardous Waste Management Plan on file at EMD. For additional information on this plan contact EMD at 502-624-8379/6598.

Hazardous Waste Coordination - The EO is responsible for hazardous waste coordination if applicable. They may appoint any number of personnel to handle hazardous waste. However, the EO is responsible for ensuring that these personnel receive familiarization training within 120 days of becoming a hazardous waste worker if applicable. Hazardous Waste Training can be obtained by either attending the 3 day or 1 day recertification course or from the proper EMD personnel

Solid Waste and Recycling Officer-The Solid Waste and Recycling Officer position is considered to be part of the EO's job description. However, the EO may appoint other personnel to assist with these duties.

Spill Contingency Plan (SCP) - Each Unit/Activity/Tenants/Contractor will have their own site specific Spill Contingency Plan (SCP) or an equivalent Emergency Response Procedure as provided by their organization. EMD has a standard SCP form.

ENVIRONMENTAL HANDBOOK Issue 016 Ver. 01

Storm Water/Ground Water Pollution Prevention and Best Management Practices - The EO is also responsible for Storm Water and Groundwater Pollution Prevention and Best Management Practices implementation, if applicable. However, the EO may appoint other personnel to perform these tasks. All appointed personnel must be on orders with a copy furnished to EMD. The EO is responsible for maintaining the training records. See Appendix N, Storm Water/Ground Water Pollution Prevention/Best Management Practices.

Training Records - Units/Activities/Tenants/Contractors should retain the following records:

- Environmental Officer Certification and ID Card: Primary and Alternate
- Unit Environmental Awareness Training
- Spill Response Training

If you have questions, please call the Environmental Management Division (EMD) at 502-624-3598/6057 or e-mail your question to: Army.Knox.EMD@Mail.mil

SECTION 4 - OPERATIONAL CONTROLS

BEST MANAGEMENT PRACTICES (BMPs)

ABSORBENTS (USED FOR POL)

Pads, Towels, Booms, Rags and Bulk

401 KAR 31, 32, 33 and 40 CFR 260-262

POSSIBLE AREAS OF CONCERN

Absorbent material saturated with POL is disposed of improperly.

CHARACTERIZATION

Absorbent materials contaminated with POL are considered non-hazardous waste. Any materials other than POL, MAY BE considered Hazardous Waste. Contact EMD at 624-8379.

HANDLING PROCEDURES

NOTE: If absorbent pads/paper towels/rags are contaminated with POL they may be disposed of at the CD/D landfill located on Baker Road, in the proper contaminated soil container.

Step 1 Bag used absorbent materials.

Step 3 Wear proper PPE listed on the SDS.



GENERAL INFORMATION

Call EMD at 502-624-3692/8379 if you clean up anything other than POL. EMD will provide guidance for proper disposal. See Appendix G and O.

ADHESIVES AND SEALANTS

401 KAR 31, 32, 33 and 40 CFR 260-262

POSSIBLE AREAS OF CONCERN

Adhesives, sealants, caulking, and epoxy parts A & B are made of combinations of chemicals suspended in a solvent that partially evaporates during use. Refer to the SDS for specific hazards.

CHARACTERIZATION

Spent adhesives and sealants, and wastes generated from use of these materials such as gloves, stir sticks, and old material removed during replacement, may be considered hazardous waste.

HANDLING PROCEDURES

Step 1 Place items in a marked container or SAP drum.

Step 2 Any reusable adhesives and sealants must be turned-in to HMCC.

Step 3 Contact EMD at 502-624-8379/6598 for disposal directions.



GENERAL INFORMATION

Contact EMD at 502-624-8379/6598 for additional information. See Appendix G.

AEROSOL CANS

401 KAR 31, 32, 33 and 40 CFR 260-262

POSSIBLE AREAS OF CONCERN

Aerosols are under pressure and may be flammable, reactive, corrosive, and/or toxic depending on the contents of the cans and the propellant involved.

CHARACTERIZATION

Aerosol cans that are no longer serviceable (e.g., broken nozzle), but that are still under pressure and/or still contain their contents, must be collected and turned in to HMCC.

HANDLING PROCEDURES

Step 1 Place containers in flammable storage cabinet.

Step 2 Ensure materials are labeled to identify contents.

Step 3 Turn in empty and unusable aerosol cans to HMCC.



Aerosol Cans

GENERAL INFORMATION

For additional information contact EMD at 502-624-8379/6598. See Appendix F.

ASBESTOS

Building Remodeling/Maintenance/Demolition

40 CFR Part 61, Subpart M and 401 KAR 58

POSSIBLE AREAS OF CONCERN

Asbestos may be found at any building on the installation. There may be increased health risks associated with not following the recommended handling procedures. Piping, floor tile and insulations may contain asbestos.

CHARACTERIZATION

Asbestos-containing materials are managed as regulated wastes by EMD accredited personnel.

HANDLING PROCEDURES

Step 1 Contact EMD at 502-624-3598/5245 to schedule an inspection. EMD personnel will make a determination on asbestos for removal and disposal.

Step 2 EMD personnel will complete the forms and reports used for asbestos removal and disposal.

Step 3 All asbestos abatement and removal is handled through initiation of a DA 4283 or Service Order. See Appendix P.

Step 4 Maintain work order number(s) to monitor status.

NOTE: Activities such as sanding, grinding, drilling, or sawing of asbestos-containing materials *are prohibited by OSHA*. Self-Help removal of asbestos-containing tiles is prohibited. Only trained and certified abatement workers may disturb or remove asbestos materials.

NOTE: The removal of asbestos requires a regulatory Notification to the Kentucky Division for Air Quality, which is submitted by the Asbestos Coordinator.



Pipe elbows, pipeline insulation

GENERAL INFORMATION

For additional information contact EMD at 502-624-3598/5245.

ASBESTOS

Disposal of Unserviceable Brake Shoes 40 CFR Part 61, Subpart M and 401 KAR 58

POSSIBLE AREAS OF CONCERN

Some brake shoes/pads or clutch disks may contain asbestos-containing materials. All brake shoes contain toxic dust.

CHARACTERIZATION

Asbestos-containing materials are managed as a Regulated Waste. These items may be handled by non-trained workers, but caution should be used and specific work practices should be followed for removal from vehicles.

HANDLING PROCEDURES FOR MILITARY & CIVILIAN ON POST

Step 1 Brake shoes will be wetted when being disturbed or handled.

Step 2 Double wrap brake shoes/pads or clutch disks in 6 mil or thicker plastic, seal with duct tape and place in a sturdy, closed container. Do not exceed 20 pounds per package. EMD will provide proper packaging.

Step 3 Label package as follows:

- a) "Danger. Contains Asbestos Fibers. Avoid Creating Dust. Cancer and Lung Disease Hazard."
- b) Generator Information (e.g. unit/activity, POC, phone).

Step 4 Place in a sturdy, closed container.

Step 5 Contact EMD at 502-624-3598/5245 for disposal instructions.



Asbestos brake shoes

GENERAL INFORMATION

For additional information contact EMD at 502-624-3598/5245.

BALLASTS, CAPACITORS AND OTHER EQUIPMENT CONTAINING PCB'S

401 KAR 31, 32, 33 and 40 CFR 260-262

POSSIBLE AREAS OF CONCERN

Polychlorinated Biphenyls (PCBs) are a major type of toxic chemical. They are suspected as a human carcinogen and have been shown to be teratogenic (capable of inducing mutations in the offspring of affected organisms).

CHARACTERIZATION

PCBs are most commonly found in electrical transformers and capacitors, air conditioning equipment and lighting ballasts.

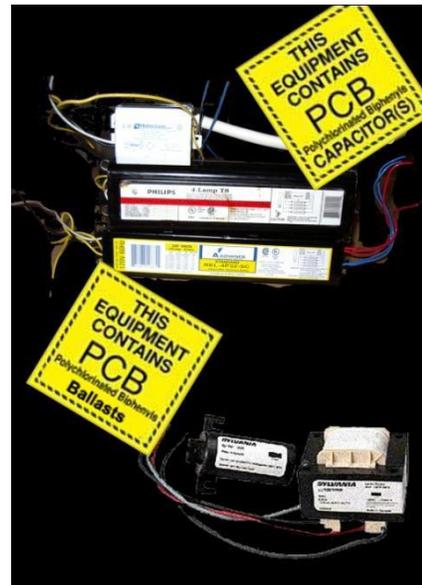
HANDLING PROCEDURES

Step 1 Non-routine (not daily maintenance operations) building and facility maintenance and building deconstruction or demolition require that all Ballasts and Capacitors are removed and controlled.

Step 2 Contact EMD at 502-624-8379/6598 to get guidance with an approved disposal process.

NOTE: Routine/daily on-post maintenance activities will collect ballasts and capacitors and place in a properly marked container.

NOTE: Activities are not authorized to sign a Fort Knox disposal manifest. All Hazardous Waste manifesting must be coordinated through EMD.



Ballasts and Capacitors may contain PCB's

GENERAL INFORMATION

Contact EMD at 502-624-8379/6598 for additional guidance.

BATTERIES (Lead-Acid)

401 KAR 31, 32, 33 and 40 CFR 260-262

POSSIBLE AREAS OF CONCERN

The cells of a lead-acid battery contain lead and lead dioxide, and an acidic electrolyte solution of sulfuric acid. The electrolyte is a strong corrosive agent. Batteries may also vent explosive hydrogen gas.

CHARACTERIZATION

Lead acid batteries are hazardous due to their lead content. It is illegal to dispose of a lead acid battery in a landfill. Do not place in trash container

HANDLING PROCEDURES

- Step 1** Establish a battery program through your Supply Support Activity (SSA) office.
- Step 2** Battery electrolyte should not be drained from the battery. Batteries should be stacked no more than two tiers high on a pallet with cardboard in between. Use NON-METALLIC material to band the batteries to the pallet for turn-in.
- Step 3** New and used batteries must be stored in areas providing acid spill containment. Store in an area that provides protection from rain/snow.
- Step 4** QRP can take all government NSN batteries with the exception of the following:
- | | | |
|----------------------|---|--------------------------------------|
| NSN 6140-01-390-1968 | } | TAKE THESE BATTERIES TO HMCC. |
| NSN 6140-01-390-1969 | | |
| NSN 6140-01-446-9506 | | |



Battery acid spill containment

NOTE: The battery recycler will accept a battery without caps or a battery with a cracked case. Damaged batteries must be double-bagged prior to turn-in (i.e., exterior case cracked). Do not store damaged batteries at the unit.

GENERAL INFORMATION

For additional information contact EMD at 502-624-5026.

BATTERIES (NON-LEAD-ACID)

(Universal Waste)

401 KAR 31, 32, 33 and 40 CFR 260-262

POSSIBLE AREAS OF CONCERN

Alkaline, Lithium, Nickel-Cadmium, Magnesium, NiCad (wet), Mercury, Lithium-Ion, Nickel Metal Hydride and Rechargeable Batteries have chemicals that are a concern during routine use and disposal and may contaminate the environment.

CHARACTERIZATION

All Lithium, Lithium-Ion, Nickel Metal Hydride, Nickel-Cadmium, Magnesium and Mercury batteries may be Universal Waste. As a best management practice, all batteries will be collected as Used Batteries and waste determinations will be made by EMD personnel.

HANDLING PROCEDURES

Step 1 Unit/activity will secure an EMD approved container with a closeable top.

Step 2 Container will be labeled EMD.

Step 3 The Used Batteries container will be picked up by EMD personnel and EMD will provide a replacement container.



Lithium, Nickel-Cadmium (NiCad), may be Universal Waste.



GENERAL INFORMATION

Contact EMD at 502-624-8379/6598 for additional information.

BULK STORAGE CONTAINERS (BSC)

55 Gallon or Larger Drums/Tanks

40CFR112

POSSIBLE AREAS OF CONCERN

Bulk Storage Containers (BSCs) do not receive proper monitoring of the structural integrity, or the interstitial space is not properly inspected, consequently there is a tank failure.

CHARACTERIZATION

Corrosion and weakening stresses can create poor structural integrity and lead to leaks and/or spills, and create potential threats to the environment.

HANDLING PROCEDURES

- Step 1** Ensure all mechanical and automatic operating parts of the BSC are operating properly.
- Step 2** Ensure the BSC has secondary containment. You must inspect the interstitial space, See Appendix B.
- Step 3** Maintain a spill kit at each BSC or in the area of multiple tanks.
- Step 4** Conduct monthly inspections using the BSC inspection form available in this handbook in the forms section.
- Step 5** Conduct inspections on open secondary containment after rainfall events to determine if the rain water has an oily sheen and document your findings on FK5111.
- Step 6** Contact EMD at 502-624-8187/6057 if an oily sheen is present after a rainfall event for guidance.

NOTE: BSC applies to 55-gallon and larger tanks located both inside and outside.



GENERAL INFORMATION

For additional information contact EMD at 502-624-2072/6057.

CBRNE (DETECTOR/DECON KITS)

401 KAR 31, 32, 33 and 40 CFR 260-262

POSSIBLE AREAS OF CONCERN

Contaminants of concern in the kits represent possible flammable and toxic hazards. Refer to SDS for specific use and handling procedures.

CHARACTERIZATION

The refill kit, when disposed of, may be a **hazardous waste** for ignitability and toxicity.

HANDLING PROCEDURES

Step 1 Contact EMD at 502-624-8379/6598 for guidance.

Step 2 Unit will be issued a container to dispose of kits.

Step 3 Unit will be required to segregate kits by type.

NOTE: Contact DRMS, 502-626-3766 for turn-in instructions for the JEAP's program concerning sending excess to DRMS or sending usable NBC equipment to units that have shortages.



CBRNE Detector/ DECON Kits

GENERAL INFORMATION

Contact EMD at 502-624-8379/6598 for guidance.

CBRNE (PROTECTIVE MASK FILTERS)

401 KAR 31, 32, 33 and 40 CFR 260-262

POSSIBLE AREAS OF CONCERN

The protective mask filters that contain ASC Whetlerite charcoal contain heavy metal chemical compounds (Chromium 6) and triethylenediamine.

CHARACTERIZATION

If these masks are equipped with the C2 (black body) ASC Whetlerized charcoal-filled canister NSN 4240-01-119-2315 or NSN 4240-21-871-7842, remove the C2 canister and manage as a hazardous waste - chromium

HANDLING PROCEDURES

Step 1 For disposal information contact EMD at 502-624-8379/6598 to establish a Satellite Accumulation Point (SAP) for hazardous waste.

Step 2 Used filters will be placed in containers provided. Containers will be closed except when adding or removing waste.

Step 3 Mask filters must be separated by type (**Green or Black**).

Step 4 When containers are filled, schedule appointment.



NOTE: NOTE: Contact DRMS, 502-626-3766 for turn-in instructions for the JEAP's program concerning sending excess to DRMS or sending usable NBC equipment to units that have shortages.

GENERAL INFORMATION

For information contact EMD at 502-624-8379/6598.

CHEMICALS (EPCRA)

42 USC § 11002, EO 13693, 40 CFR, 29 CFR, AR 710-2, DA PAM 710-7

POSSIBLE AREAS OF CONCERN

Failure to report the qualifying chemicals to the proper agencies could lead to regulatory violations and pose a serious health risk to personnel, property and the environment.

CHARACTERIZATION

All activities and tenants are required to process hazardous materials (HM) brought to Fort Knox, through the Hazardous Materials Control Center (HMCC). This allows for annual regulatory reporting in accordance with Emergency Planning and Community Right-to-Know Act (EPCRA) and cradle-to-grave management of hazardous materials.

HANDLING PROCEDURES

Step 1: Obtain approval from the EMD EPCRA Program Manager prior to purchasing new types of HM. Meaning - Products that are new to the installation and have never been processed through the HMCC in the past.

Step 2: Ensure vendor/manufacture provides a copy of the SDS with the HM purchased.

Step 3: Ensure all HM is delivered to the HMCC for processing through the HM database (EESOH-MIS). This includes any HM that is purchased from retail locations on or off the installation or through DoD Email. In rare circumstances when HM is delivered directly to the user's location and bypasses the HMCC, it is the user's responsibility to take the material to the HMCC for processing, ASAP.



Step 4: When HM has been used, the user must return the empty container(s) to HMCC. The HMCC will remove the HM from the user's inventory and process the container(s) for recycling.

Note 1: All flammable material and aerosols must be stored in a flammable locker/connex.

Note 2: It is the responsibility of the user to ensure all HM is properly labelled with a bar code sticker from the HMCC and a current SDS is on file and available for each product.

GENERAL INFORMATION

For additional information call 502-624-3598.

CHEMICAL AGENT RESISTANT COATING (CARC) PAINTING

401 KAR 50, 51, 52, 53 and Fort Knox Air Quality Permit

POSSIBLE AREAS OF CONCERN

Chemical paints contain hazardous substances that may create air pollutants.

CHARACTERIZATION

DoD has authorized the use of water-reducible paints which reduce air emission. These paints are available on the DoD Qualified Product Listing.

HANDLING PROCEDURES

Step 1 Contact EMD Air Permit personnel at 502-624-8263/8186 for guidance on paint consumption limits along with record keeping and monitoring requirements.

Step 2 Contact the Installation Safety Office at 502-624-4407 for information on personal protection equipment (PPE).

Step 3 Spot painting or touch up work with CARC paint is limited to a total usage of five (5) gallons per day per facility.

Step 4 All work greater than five (5) gallons usage will be done at the Boatwright Paint Booth Building 2778.

Step 5 Complete the monthly reports for paint usage and submit to EMD Air Permit Program Manager.

Step 6 Maintain all paint usage, inspection and monitoring records for a minimum of five (5) years.

Note: The use of oil or solvent base paints in a spray painting operation may have air permitting usage and inspection requirements. Contact EMD at 502-624-8263/8186 for guidance

GENERAL INFORMATION

Contact EMD at 502-624-8263/8186 for additional guidance.

CONSTRUCTION/DEMOLITION DEBRIS (CD/D)

401 KAR 47 AND 48 and FORT KNOX REGULATION 200-2

POSSIBLE AREAS OF CONCERN

Potential environmental impacts associated with the land-filling of CD/D debris are groundwater, water and air pollution. A growing concern involves the environmental impacts linked with the disposal of pressure-treated lumber. DoD Sustainable Management of Waste in Military Construction, Renovation and Demolition Activities can minimize the potential negative environmental impact while achieving mandatory waste reduction goals.

CHARACTERIZATION

Only non-hazardous CD/D debris that cannot be reused or recycled can be taken to the installation's CD/D Landfill. Materials comprising CD/D debris can sometimes be contaminated with undesirable components and/or toxic compounds such as asbestos, lead-based paint, varnish, creosote and adhesives. CD/D debris determined to be hazardous is regulated under RCRA Subtitle C, while non-hazardous CD/D debris is regulated under RCRA Subtitle D. Contact EMD at 502-624-3692 for clarification on CD/D waste.

HANDLING PROCEDURES

Step 1 Contractors must develop and submit a CD/D Waste Management Diversion Plan (must achieve 60 % diversion) for approval by general contract COR. Contractors must evaluate all diversion options and make good-faith effort to achieve the highest diversion rate within the project schedule and budget.

Step 2 Submit weights generated by reusing, salvaging, returning or recycling to EMD Compliance once a month and at the completion of the contract.



CD/D Debris Segregated for Recycling

GENERAL INFORMATION

For more information contact EMD at 502-624-3692/8379.

Dig Permit/Utility Locate

Cantonment and Training Areas

KRS 367.4901 to 367.4917 and AR 420.1

POSSIBLE AREAS OF CONCERN

Failure to locate underground utilities (water/sewer, electric, gas, phone, steam/chill water, control cables, petroleum/POL, cable TV) and environmental/historical sensitive areas (archeological sites, former solid waste disposal sites) can cause dangerous interruptions, hazardous situations and potential violations and fines. Additional clarifying information can be found in AR Regulation 420-1. http://www.apd.army.mil/AdminPubs/series_range_regs.asp?search=420

CHARACTERIZATION

UTILITY LOCATIONS are required before any digging, excavation, or earthwork is performed within the cantonment or rear training areas. All utilities must be properly marked. Digging may create storm water and waste issues. Digging includes foxholes and equivalent training excavation. This applies to military, civilians, tenants, contractors, utility operators or any other entity performing excavation of soil within the Fort Knox cantonment area and/or any road and utility right- of-ways, training areas & facilities/complexes in the rear area.

HANDLING PROCEDURES

- Step 1 CALL EMD at 502-624-5174 and speak with the NEPA contact person 10-15 days prior to starting work.
 - Step 2 CALL 811 or 800-752-6007. Personnel at this number will notify NOLIN RECC, Insight, Veolia, Hardin Co. Water, and ATT Fiber. Requests **MUST** be initiated a minimum of 3-10 working days before excavation is to begin. You must provide all requested information.
 - Step 3 CALL DPW at 502-624-1171 for service order to connect gas, water, sewer from a building to the main supply pipe and electrical from the building to the primary transformer.
 - Step 4 In addition you must call;
 - DPW at 502-624-5954 for gas lines,
 - NEC at 502-624-8888 for POST telephone lines,
 - Cultural Resources (Historical) at 502-624-6281,
 - Restoration Office at 502-624-8537,
 - Natural Resources (Forestry) at 502-624-7368, and
 - Range Control (Training Areas) at 502-624-3536.
 - Step 5 Survey information must be verified by all agencies in Step 4 prior to any digging.
- Note:** Range Excavations- you must submit a memorandum to Cultural Resources (format available from Range Control or EMD).
- Note:** All movement of soils and construction materials other than demolition debris on Fort Knox must be coordinated through EMD at 502-624-8537.



APWA UNIFORM COLOR CODE for marking underground utility lines

Proposed Excavation	
Temporary Survey Markings	
Electric Power Lines, Cables, Conduits, & Lighting Cables	
Gas, Oil, Steam, Petroleum or Gaseous Materials	
Communication, Alarm or Signal Lines, Cables or Conduit	
Potable Water	
Reclaimed Water, Irrigation, & Slurry Lines	
Sewer & Drain Lines	

GENERAL INFORMATION

For additional information contact EMD at 502-624-8537 and/ or DPW at 502-624-1171.

DRIP PADS

401 KAR 4, 5 AND 10 and KPDES PERMIT

POSSIBLE AREAS OF CONCERN

F-24, other fuels and oil can potentially contaminate storm water and ground water.

CHARACTERIZATION

DRIP PADS will only be placed under leaking vehicles to prevent POL products from dripping on to the ground. Drip pads are designed to captured POL products but not rain water.

HANDLING PROCEDURES

Step 1 Place drip pads under leaking vehicles only.

Step 2 Initiate the necessary documentation to have the leaking vehicle repaired.

Step 3 Drip pads will be serviced as needed and checked for serviceability after a rain fall event.

NOTE: Each drip pad will hold approximately 1 gallon of POL product.



GENERAL INFORMATION

For more information contact EMD at 502-624-8187/6057.

FILTERS-POL

401 KAR 31, 32, 33, and 40 CFR 260-262

POSSIBLE AREAS OF CONCERN

Oil filters have metals in varying levels. Refer to the respective SDS's for specific hazards.

CHARACTERIZATION

Some discarded filters may contain hazardous chemicals.

CONTAINER MARKING AND HANDLING PROCEDURES

Step 1 Turn-in drained filters to Building 2770 for crushing and recycling.

NOTE: DO NOT discard any filters in trash dumpsters.



GENERAL INFORMATION

For additional information contact EMD at 502-624-8379/6598.

FLAMELESS RATION HEATERS (FRH)

401 KAR 31, 32, 33 and 40 CFR 260-262

POSSIBLE AREAS OF CONCERN

FRHs are discarded improperly.

CHARACTERIZATION

The Environmental Protection Agency (EPA) has determined that these are not hazardous waste and do not pose a threat to the environment.

HANDLING PROCEDURES

Step 1 While in the training area, used individual FRH heaters may be placed in the trash.

Step 2 Units should contact EMD at 502-624-8379/6598 to turn in large amounts of unused/unopened FRHs.



GENERAL INFORMATION

Contact EMD at 502-624-8379/6598 for additional guidance.

FLUORESCENT and MERCURY-CONTAINING LAMPS

401 KAR 31, 32, 33 and 40 CFR 260-262

POSSIBLE AREAS OF CONCERN

Small quantities of mercury and lead are used to manufacture fluorescent lamps and mercury vapor lamps, metal halide and high pressure sodium lamps.

CHARACTERIZATION

Lamps including fluorescent lamps and mercury-containing lamps are Universal Wastes and these are recycled.

HANDLING PROCEDURES

Step 1 Place used fluorescent lamps/tubes in a container provided by EMD. Lamps must be separated by size and type.

Step 2 Date the box with the date the first used lamp/tube is put in the box/container (Used lamps/ bulbs will not be maintained in the collection area longer than 1 year).

Step 3 Always close container after adding a bulb/lamp.

Step 4 Contact EMD at 502-624-8379/6598 for disposal.

NOTE: Broken lamps/tubes should be swept up and double bag and call EMD 502-624-3629.

NOTE: Reusable fluorescent lamps can be turned-in to Self-Help located in building 2954.



GENERAL INFORMATION

For additional information contact EMD at 502-624-8379/6598.

FUELS

(Purged or Contaminated)

401 KAR 31, 32, 33 and 40 CFR 260-262

POSSIBLE AREAS OF CONCERN

F-24 and gasoline are DOT-flammable materials and should be handled in accordance with appropriate safety guidelines and respective SDS.

CHARACTERIZATION

Purged or contaminated fuels may contain excessive water, bacteria that feeds on fuel and may excrete acids that will corrode the fuel tank overtime.

HANDLING PROCEDURES

Step 1 For disposal call 502-624-8379/6598.

Step 2 Do not dispose of any contaminated fuels without approval by EMD.

Step 3 Small quantities (5 gallons or less) of contaminated fuel may be turned in to QRP.



GENERAL INFORMATION

For more information contact EMD at 502-624-8379/6598.

GAS CYLINDERS (COMPRESSED)

401 KAR 31, 32, 33 and 40 CFR 260-262

POSSIBLE AREAS OF CONCERN

Oxygen, acetylene, argon and other pressurized bottles have hazards associated with fire and pressurized containers.

CHARACTERIZATION

Refillable compressed gas cylinders are used for both civilian and military operations. Compressed gas cylinders are handled according to DRMS-1-4160-14, Section 3 - Special Processing.

HANDLING PROCEDURES

Step 1 Contact DRMS at 502-626-3769 for assistance with issue, turn-in and exchange of cylinders and resupply of gases.

Step 2 Storage requirements should be coordinated with Fire Department and Installation Safety Office.

Step 3: Commercially Owned Compressed Gas Cylinders

- Return these cylinders to the owner.

Note: Medical oxygen cylinders are issued and exchanged at IACH Medical Supply.

Note: Small Carbon Dioxide or Nitrogen cylinders with no valves should be considered empty when punctured and discharged.

Note: For compressed gases and cylinders for all fire suppression systems (FSS) and air-conditioning and refrigeration (A/C) systems installed in Army weapon systems or equipment review ALARACT031/2012.



Cylinders

DRMS may not accept physical custody of any cylinders, *unless rendered scrap.*

DRMS may accept accountability of non-hazardous or hazardous cylinders on behalf of the activity reporting the excess cylinders.

See DRMS-1-4160-14, Section 3 - Special Processing.

GENERAL INFORMATION

For additional information contact DRMS at 502-626-3769.

GAS CYLINDERS (DISPOSABLE)

Non-reusable, single-use containers (i.e., Propane, Ether, MAPP, Calibration Gases, Helium, for balloons)

401 KAR 31, 32, 33 and 40 CFR 260-262

POSSIBLE AREAS OF CONCERN

Propane, ether and other pressurized bottles have hazards associated with fire and pressurized containers.

CHARACTERIZATION

Non-refillable propane and MAPP gas bottles are used for plumbing operations, personal heating and vehicle operations. These gases represent physical and environmental hazards if not disposed of properly. Contact EMD at 502-624-8379/6598 for guidance on ether cylinders.

HANDLING PROCEDURES

Step 1 Place non-refillable propane, MAPP gas or ether bottles in a properly labeled and secured storage container.

NOTE: Take empty personal propane cylinders (used on grills) to the PX for exchange or turn in.



Mapp Gas/Ether gas Bottles

GENERAL INFORMATION

For additional guidance contact EMD at 502-624-8379/3598.

GRAY WATER

401 KAR 4, 5, 10 and KPDES Permit

POSSIBLE AREAS OF CONCERN

Improperly handled gray water during field exercises from MKTs and field showers could result in the release of contaminants into the environment, particularly the storm water and groundwater.

CHARACTERIZATION

Gray water contains potential environmental pollutants. Digging gray water pits is prohibited at Fort Knox unless it is a training requirement. EMD will issue an authorization for digging gray water pits. Visiting units are allowed to bring their own gray water containers to Fort Knox.

HANDLING PROCEDURES

Field Exercises

- Step 1** Contact EMD at 502-624-8187 or e-mail a request to: Army.Knox.EMD@Mail.mil for a copy of the request application for gray water containers or gray water pit clearance.
- Step 2** Gray water tanks will be obtained from QRP at 502-624-5026. You will need a copy of the approved application.
- Step 3** Collect gray water from field kitchens, field showers and field laundries.
- Step 4** It is the unit's responsibility to transport gray water to the WWTP. The WWTP operates 24/7 and can be contacted at 502-942-6020.
- Step 5** Rinse the gray water tank prior to turn in to QRP at building 2962.



GENERAL INFORMATION

Contact EMD at 502-624-8187/6057/3692 for additional guidance.

GREASE (MAINTENANCE)

401 KAR 31, 32, 33 and 40 CFR 260-262

POSSIBLE AREAS OF CONCERN

GAA grease contains petroleum hydrocarbons and additives. Refer to the SDS for specific hazards.

CHARACTERIZATION

Grease contaminated with dirt, water, or other materials is a non-hazardous waste due to the petroleum constituents.

HANDLING PROCEDURES

Step 1 Unexpired grease should be turned in to HMCC for reuse. Contact HMCC at 502-624-5101 to turn in surplus grease.

Step 2 Place expired or contaminated grease in a labeled container and take to the landfill for disposal in the POL roll off.



GENERAL INFORMATION

For additional information contact EMD at 502-624-8379/6598.

HAZARDOUS MATERIALS (INVENTORY PROCEDURES)

42 USC § 11002, EO 13693, 40 CFR, 29 CFR, AR 710-2, DA PAM 710-7

POSSIBLE AREAS OF CONCERN

Failure to report the qualifying chemicals to the proper agencies could lead to regulatory violations and pose a serious health risk to personnel, property and the environment.

CHARACTERIZATION

All activities and tenants are required to process hazardous materials (HM) brought to Fort Knox, through the Hazardous Materials Control Center (HMCC) and maintain a **14 day supply*** of the required operating hazardous materials. This allows for annual regulatory reporting in accordance with Emergency Planning and Community Right-to-Know Act (EPCRA) and cradle-to-grave management of hazardous materials. Store these hazardous materials in a Flammable Storage Cabinet or a HAZMAT shed, as appropriate.

HANDLING PROCEDURES

Step 1: Obtain approval from the EMD EPCRA Program Manager prior to purchasing new types of HM. Meaning - Products that are new to the installation and have never been processed through the HMCC in the past.

Step 2: Ensure vendor/manufacturer provides a copy of the SDS with the HM purchased.

Step 3: Ensure all HM is delivered to the HMCC for processing through the HM database. This includes any HM that is purchased from retail locations on or off the installation or through DoD Email.

Step 4: When HM has been used, the user must return the empty container(s) to HMCC. The HMCC will remove the HM from the user's inventory and process the container(s) for recycling.

Step 5: Promptly complete the annual inventory sent out by the HMCC (usually around 1 November), and return to the HMCC by the suspense date.

NOTE 1: All flammable material and aerosols must be stored in a flammable locker/connex.

NOTE 2: Always practice First In-First Out (FIFO) to avoid creating excess waste.

NOTE 3: It is the responsibility of the user to ensure all HM is properly labelled with a bar code sticker from the HMCC and a current SDS is on file and available for each product.

* Exemptions to the 14 day supply must be obtained from EMD.



GENERAL INFORMATION

For additional information call 502-624-3598.

HAZARDOUS MATERIALS (STORAGE PROCEDURES)

29 CFR 1910, EPCRA 311-312 and AR 710-2

POSSIBLE AREAS OF CONCERN

Chemicals are stored improperly. Mixing incompatible chemicals could cause a spill or violent chemical reaction.

CHARACTERIZATION

Flammable storage cabinets provide a safe way to store chemical inventories.

HANDLING PROCEDURES

Step 1 Return all contaminated/unserviceable materials and empty containers to the Flammable Storage Cabinet.

Step 2 Ensure all materials placed in the cabinet are properly marked to identify contents.

Step 3 Ensure containers are closed with a lid that will prevent a release of the material in the event the container is turned over or the release of a toxic gas from solvent chemicals.

Step 4 Conduct monthly HAZMAT Storage Inspections (one for each cabinet). See Appendix D for the form- FK5058.

Step 5 Contact EMD for guidance when emptying a cabinet and possible turn-in for re-use.



NOTE: Post and maintain a chemical inventory for all Flammable Storage Cabinets on the front of the cabinet door, along with the location of the applicable SDSs.

NOTE: Hazardous materials/chemical containers must be marked or labeled to identify the contents of the container, per OSHA requirements.

NOTE: All containers must be closed when not in use.

NOTE: If you use a flammable storage cabinet for non-flammable storage, label it accordingly (i.e. cleaning supplies, etc.).

GENERAL INFORMATION

For additional information contact EMD at 502-624-3598/6057.

LEAD CONTAINING PAINT

(*SURFACE PREPARATION-RENOVATION*)

401 KAR 31, 32, 33 and 40 CFR 260-262

POSSIBLE AEAS OF CONCERN

Some amount of lead in paint is common across the installation in some old buildings. There may be increased health risks associated with not following the recommended handling procedures.

CHARACTERIZATION

Lead has been used in paint to enhance durability. When preparing areas for resurfacing/repainting worker procedures should be followed. Lead-based paint may only be removed by licensed, accredited workers.

HANDLING PROCEDURES

Step 1 Contact EMD at 502-624-3598/5245 to schedule an on-site inspection or submit a work order through the DPW Work Order Section (See Appendix P for instructions).

Step 2 If available, EMD will review the building survey information to verify if Lead-Based paint is present.

Step 3 If no information is available for the building EMD will perform a Lead-Based Paint survey using an X-Ray Fluorescent Analyzer (XRF).

Step 4 Follow guidance provided by EMD.



NOTE: Always contact EMD if you are not sure about painted materials before disturbing.

GENERAL INFORMATION

For additional information contact EMD at 502-624-3598/5245.

MOLD

40 KAR 2:330

POSSIBLE AREAS OF CONCERN

Elevated mold spore levels may cause health effects if contamination and source of contamination is not addressed. Some health effects may include allergy-like symptoms such as skin/eye irritation, watery eyes, nasal congestion, shortness of breath, wheezing, headaches, etc.

CHARACTERIZATION

There is no practical way to eliminate all mold spores indoors as mold naturally occurs outdoors and is brought indoors by opening doors, windows, fresh air supply, etc. Once indoors, any damp, humid, poorly ventilated, poorly insulated areas may allow for mold growth. Fungal reservoirs can be found growing on organic surface that may include painted surfaces, drywall, wood paneling, ceiling tiles, some carpets, insulation vapor barrier, dust, etc.

The best practice is to prevent elevated moisture levels in a building and keep humidity below 60% Relative Humidity (rH). These practices may include using exhaust fans in shower areas, kitchens and other rooms where humidity is produced. Well-sealed vapor barrier in the crawl space, crawl space vents are open and free of blockages and routine cleaning and maintenance of HVAC filters and associated ductwork/diffusers. HVAC, ductwork and piping should be insulated to prevent condensation. Exterior walls should be properly and adequately insulated and exterior surfaces should be maintained to prevent moisture intrusion.

HANDLING PROCEDURES

Step 1 When you see what appears to be mold you should avoid all contact.

Step 2 If possible isolate the suspected mold area and keep personnel away from the area.

Step 3 See Appendix P for Work Order procedures.

Step 4 Report the suspected mold to EMD at (502) 624-3598/5245 or Post Safety.



Black Mold on a Ceiling

GENERAL INFORMATION

For additional information see Appendix P for Work Order procedures or contact EMD at 502-624-3598/5245.

NATURAL RESOURCES

AR 200-3 & KPDES PERMIT

POSSIBLE AREAS OF CONCERN

Soil erosion contributes to the buildup of sediment in drainage channels, clogs drainage ways and results in poor water quality. Crossing streambeds and traveling along the stream bank with heavy vehicles contribute to the loss of the installation's training lands by soil erosion. Heavy vehicle traffic destroys vegetation and loosens the bank materials. Gully and stream bank erosion accelerates when runoff water funnels down the rutted banks.

CHARACTERIZATION

The Natural Resources Branch provides the conservation and management of the installation's natural resources (land, forest, wildlife, water) through the coordinated efforts of the DPW Environmental Management Division, Directorate of Plans, Training, Mobilization and Security (DPTMS) and the training community.

HANDLING PROCEDURES

The following Best Management Practices (BMPs) must be followed to sustain the training lands and protect the installation's water resources.

Step 1 Cross-streams only at a designated crossing site.

Step 2 Washing vehicles in a stream or driving vehicles along a stream bed is prohibited.

Step 3 Do not use dry streambeds and natural waterways as travel routes.

Step 4 Field servicing of vehicles should be conducted only in approved locations which are away from lakes, streams and rivers.

NOTE: See Appendix I for additional information on the Fort Knox Natural Resources management program.



GENERAL INFORMATION

For additional guidance contact the Natural Resources Branch at 502-624-7368/7373.

OIL WATER SEPARATOR (OWS) 401 KAR 4, 5 AND 10 AND KPDES PERMIT

POSSIBLE AREAS OF CONCERN

Illegal dumping of pollutants into the sewer or storm water system may violate compliance requirements.

CHARACTERIZATION

Oil Water Separators serve as the primary gravity pretreatment device for treating wash water prior to being discharged into the wastewater collection system or the storm water system. Dumping large volumes of oil or other pollutants defeats the purpose of the OWS.

HANDLING PROCEDURES

- Step 1** Ensure the OWS is operating correctly by checking the discharge to the storm water system. OWSs should be monitored when using maintenance bay drains. A drain backup may indicate the OWS is full or stopped up.
- Step 2** Ensure that no one in your unit pours oil or other pollutants into the OWS.
- Step 3** Ensure maintenance bay floor drains have absorbent socks in place.
- Step 4** Contact DPW for maintenance.
- Step 5** Contact EMD to determine oil/water separator locations, types and respective monitoring requirements.
- Step 6** OWS discharging to the stormwater system must have the discharge point or opening inspected monthly for discoloration or evidence of spillage.



Note: The stormwater site plan shows the location of your OWS and identifies where the OWS discharges to – sewer or stormwater system.

GENERAL INFORMATION

Contact EMD at 502-624-8187/6057 for additional information.

OZONE DEPLETING SUBSTANCES (ODSs)

KENTUCKY REGULATIONS 401 KAR 50, 51, 52 and 53

POSSIBLE AREAS OF CONCERN

Failure to properly handle ODSs creates the potential for air pollutants and violation of federal, state, local and Fort Knox regulations.

CHARACTERIZATION

All ODS recovery and recycling equipment must be registered with the Environmental Protection Agency. Maintenance or repair shall be done by EPA certified technicians who have attended and completed an approved Section 608 (appliances) or 609 (MVAC) Technician Training and Certification Program. Copies of the certifications should be kept on-site.

HANDLING PROCEDURES

ODS Recovery/Recycling Equipment

Step 1 Ensure that repair technicians are properly certified and have a copy of their certification on site.

Step 2 Ensure that all new equipment is purchased from the EPA list of approved equipment located at:

http://www.epa.gov/ozone/title6/609/technicians/ap_pequip.html

Motor Vehicle Air Conditioning (MVAC)

Recovery/Recycling Equipment

Step 1 Motor vehicles' AC are regulated by EPA Section 609 regulations and applies to all government owned and tactical vehicles.

Step 2 Only certified soldiers with units are authorized to operate MVAC equipment.

NOTE: All surplus CFCs 11, 12, 114, 500, 502; Halons 1202, 1211, 1301, 2402 and HFC-22 (new, recovered and contaminated) are required to be turned into the ODS Reserve (Defense Logistics Agency) located in Richmond, VA. Turn in of any of the above listed ODSs is coordinated through EMD. Send an email to: army.knox.emd@mail.mil to request turn-in instructions.

NOTE: ALL ODS RECOVERY CONTAINERS MUST BE LABELED WITH THE CONTENTS AT THE TIME OF THE RECOVERY.



GENERAL INFORMATION

For additional information contact EMD at 502-624-8263/8186

PAINT & PAINT-RELATED MATERIAL

Oil-based Paint and Stain; Latex (Water)-Based Paint and Stain

401 KAR 31, 32, 33 and 40 CFR 260-262

POSSIBLE AREAS OF CONCERN

Paints and paint-related material may contain chemicals that may be flammable. Refer to the SDS for specific hazards.

CHARACTERIZATION

Tarps, rollers, brushes, gloves and stir sticks that have dried may be placed in the trash.

HANDLING PROCEDURES

Step 1 Contact HMCC at 502-624-5101 to turn-in.

Step 2 Unit will be responsible for transporting the paint to the HMCC.

NOTE: Paint materials/brushes/rollers must not be cleaned in unit/activity parts washers.

NOTE: If you choose to keep the paint, it must be stored in a climate-controlled area (avoid freezing and high temperatures).



Paint and stain must be turned into the HMCC.

GENERAL INFORMATION

For additional information contact EMD at 502-624-8379/6598 for guidance.

PARTS WASHERS/WEAPONS CLEANERS/SOLVENT TANK/DEGREASERS

Fort Knox Air Permit and 401 KAR 31, 32, 33 and 40 CFR 260-262

POSSIBLE AREAS OF CONCERN

Unauthorized use of parts washers may violate Fort Knox and Kentucky regulations. All personnel using these machines are to read and adhere to the SDS, warning labels and information posted on parts washing equipment.

CHARACTERIZATION

Parts washer solvent can contain heavy metals and other contaminants hazardous to the environment. This solvent is recycled to reduce procurement and the environmental impact of hazardous waste generated. Solvent-based parts washers may be brought on the installation only after prior approval and permitting has been done through EMD for the KY Air Permitting regulations.

ALL PARTS WASHERS MUST HAVE THE LID CLOSED WHEN NOT IN OPERATION AND THE WHITE REGULATORY LABEL STICKER AFFIXED ON THE WASHER.

The absence of this decal constitutes a violation of State and Federal requirements.

HANDLING PROCEDURES

- Step 1** Excessive dirt (etc.) should be removed from parts before using parts washing equipment.
 - Step 2** Do not contaminate parts washer solvent with other chemicals, i.e. paint, paint cleaning solvents, POL products, gasoline, etc. This helps reduce the generation of hazardous waste and protects the environment.
 - Step 3** Do not move parts washing equipment without contacting EMD 624-8263/8161/8379.
 - Step 4** Do not block access to the parts washer.
 - Step 5** Parts washers with external filters must have the filters tested prior to disposal.
- Note:** Lids on all parts washers must be closed when not in use. A label should be on the parts washer indicating “Keep Closed When Not In Use.”
- Note:** Contact EMD for approved equipment and/or solvents.



GENERAL INFORMATION

Contact EMD at 502-624-8263/8186/8379 for guidance.

PESTICIDES, HERBICIDES, RODENTICIDES, DODI 4150.7

POSSIBLE AREAS OF CONCERN

These items are designed to kill various pests, rodents and plants. These chemicals are under the control of the Fort Knox Natural Resources Branch. The use and application must be done by certified personnel.

CHARACTERIZATION

Fort Knox Natural Resources uses certified contractors in the application of these chemicals.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Personnel must be a KY/DoD certified applicator and provide the Natural Resources Branch a copy of their certification.
- Step 2** Restricted use chemicals require trained and certified applicators and storage practices. Purchase of restricted use chemicals with a Government Credit Card (GPC) is restricted only to a certified applicator.
- Step 3** Maintain product marking, labeling and identification on containers and SDSs.
- Step 4** Maintain an inventory of chemicals both used and stored.
- Step 5** All usage must be recorded and submitted to Installation Pest Management Coordinator-Natural Resources Branch.



GENERAL INFORMATION

For additional information contact the Natural Resources Branch at 502-624-7368/7373.

PRESSURE CLEANING EQUIPMENT

401 KAR 4, 5, 10 and KPDES PERMIT

POSSIBLE AREAS OF CONCERN

Improper vehicle and equipment washing could introduce pollutants into the surface waters of Fort Knox and potentially violate federal, state, local and Fort Knox regulations.

CHARACTERIZATION

All cleaning operations on the exteriors of vehicles and equipment will be performed at the wash rack located on the corner of Wilson and Frazier Roads unless the activity has an authorized on-site wash rack.

HANDLING PROCEDURES

Step 1 No washing or cleaning is permitted outside on aprons or parking areas.

Step 2 Washing inside of maintenance facilities is only permitted if the building is connected to an oil/water separator.

Step 3 Absorbent white socks must be placed around floor drains to reduce amounts of POL entering the OWS.

Step 4 Used absorbent socks are to be drained of free flowing liquids and disposed of in the contaminated soil dumpster at the CD/D Landfill.



MAIN WASH RACK
624-7213 or 624-2063

GENERAL INFORMATION

For additional information, contact EMD at 502-624-8187/6057.

RAGS

401 KAR 31, 32, 33 and 40 CFR 260-262

POSSIBLE AREAS OF CONCERN

Cloth rags saturated with POL or other materials may be flammable and/or toxic.

CHARACTERIZATION

Cloth rags contaminated with POL are considered non-hazardous waste, but rags contaminated with solvents should be tested for hazardous characteristics.

CONTAINER MARKING AND HANDLING PROCEDURES

Step 1 Oil/water rags - Place in a plastic bag and dispose of at the Fort Knox Landfill. Make sure the rags do not have free running liquid.

Step 2 Solvent rags – Place in a properly labeled container. Contact EMD for disposal instructions.



Rags may be toxic or flammable depending on the contaminant.

GENERAL INFORMATION

For additional information contact EMD at 502-624-8379/6598.

RANGE/FIELD PRACTICES

POSSIBLE AREAS OF CONCERN

Improper use of range and training areas may lead to environmental contamination to the soil, storm water and groundwater, and damage the natural environment or disturb historical sites.

CHARACTERIZATION

Training activities, including cooking, personal hygiene, shower/latrine operations, weapons and equipment cleaning use various materials and chemicals that must be collected and properly disposed of at the proper locations or operations. For additional information contact EMD at 502-624-3629 or Range Control at 502-624-2125.

HANDLING PROCEDURES

Step 1 Range Briefing-Attend the range briefing to receive information on range practices.

Step 2 Batteries – Collect used lead-acid batteries and turn in to QRP. **Tape the contact points.**

Step 3 Cooking Grease/Cooking Oil-Contact QRP at **502-624-5026** to obtain a grease container for your used cooking grease/oil.

Step 4 Cultural Resources-All Fort Knox cemeteries and archeological areas are off limits (50 foot buffer zone) during all training exercises.

Step 5 Field Latrines- USE existing constructed latrines or portable latrines. Contact Range for information on the delivery of portable latrines.

Step 6 Fueling Vehicles/Equipment- Spill Prevention
Use the proper size overflow collection container (large absorbent pad or containment pallet).

Step 7 Gray Water Tank- Contact EMD at 502- 624- 8187/3692 to obtain the application to request authorization for Gray Water generation. It is the unit's responsibility to transport gray water to the WWTP. Contact WWTP at 502- 942-6020. The WWTP operates 24/7.

Step 8 Military Vehicle Washing – Schedule the Wash Rack located at Wilson and Frazier Road. The Wash Rack Contact numbers are 502- 624-7213 or 502- 624-2063. **DO NOT WASH VEHICLES IN CREEKS OR STREAMS.**

Step 9 Natural Resources-Fort Knox has 3 protected bat species. Do not disturb bats. **DO NOT CUT TREES.** See Appendix I for more information.

Step 10 Parts Washers- Contact EMD at 502-624- 8163/8186 to request a permit.

Step 11 Recycle/Trash Containers-EUSS coordinates trash containers with Red River and recycle containers with QRP. Do not burn /bury trash.

Step 12 Spills & Spill Materials- (YOU SPILL – YOU DIG) You must have sufficient spill materials on hand at all times for a 100 gallon spill. Report all range spills to Range Control at 502-624-2125 and cantonment spills to the Fire Department at 911.

Step 13 Tactical Excavation-Any digging for training or tactical excavation requires you to submit a memorandum to Fort Knox Cultural Resources (building 9297 – Phone 502-624- 6581), prior to submission to the Range Branch.

-Memorandum must be on Unit Letter Head signed by the company commander

-List unit and unit POC with phone number

-Indicate the purpose for digging

-Dates of training/digging

-Training area with 8 digit grid coordinate and approximate acreage/footage

-Include an overhead or map attachment showing the requested area of ground disturbance.

Cultural Resources will approve or forward to other EMD personnel for final approval.

Step 14 Used Oil & Used Antifreeze - Visiting UNITS may obtain containers for used oil and used antifreeze. Contact QRP at 502-624- 5026 to deliver your used oil and antifreeze.

Step 15 Water Release (Field)-Units making fresh water must contact EMD @ 502-624-8187 for authorization and guidance.

Step 16 Weapons Cleaning Materials- Collect weapons cleaning materials and contact EMD at 502-624-8379 for turn in.

For additional information you can email EMD at: army.knox.emd@mail.mil

SATELLITE ACCUMULATION POINT (SAP) UNIVERSAL WASTE COLLECTION AREA (UWCA)

401 KAR 31, 32, 33 and 40 CFR 260-262

POSSIBLE AREAS OF CONCERN

Waste disposed of improperly will create violations of the Resource Conservation Recovery Act (RCRA).

CHARACTERIZATION

Materials classified as hazardous waste or universal waste require special handling and collection through the use of SAPs or UWCA. A hazardous waste SAP is used for the accumulation of hazardous waste. A Universal Waste Collection Area (UWCA) is used for the accumulation of universal waste.

HANDLING PROCEDURES

Step 1 Contact EMD at 502-624-8379/6598 to determine the need for a SAP/UWCA site.

Step 2 SAP/UWCA containers must be labeled as Hazardous Waste or Universal Waste with the label facing out and visible. SAP/UWCA containers must remain closed unless adding to or removing material from the container.

Step 3 The SAP/UWCA site must be under the direct control of the SAP/UWCA operator at or near the point of generation.

Step 4 Each SAP/UWCA site requires inspections. Fax your completed inspection forms to EMD at 502-624-3000.

Note: Units arriving at Fort Knox for training must contact EMD at 502-624-8379/6598 for appropriate guidance.



HAZARDOUS WASTE



UNIVERSAL WASTE

GENERAL INFORMATION

For guidance see Appendix G or contact EMD at 502-624-8379/6598.

SELF HELP

Repair & Utilities (R & U)

POLLUTION PREVENTION ACT OF 1990 & EXECUTIVE ORDER 13693

POSSIBLE AREAS OF CONCERN

Excess and reusable items shall be reused and not disposed of in a landfill.

CHARACTERIZATION

R & U/Self-Help, located in building 2954, is available for placing orders for various materials and items needed in performing maintenance/upkeep to facilities. The Self-Help facility accepts various excess/reusable items which are available free-of-charge to all activities on post on a first-come first-serve basis. Various tools are available for loan and return.

HANDLING PROCEDURES

Step 1 Complete a Signature Card (DA 1687).

Step 2 Attend the R&U Training in building 2954 and turn-in your signature card at this training.

Step 3 Contact R & U at 502-624-7879 for available free or loan items.

NOTE: R & U Training includes,

- Overview of R&U
- Free Issue Program (HMCC)
- Safety Training
- Asbestos and Lead Awareness
- Pollution Prevention (P2)
- Green Procurement
- Sustainability (EMS)

NOTE: R&U Training can be scheduled as needed.



GENERAL INFORMATION

Contact R & U/Self-Help at 502-624-7879 for additional information.

STORMWATER BEST MANAGEMENT PRACTICES (BMP) CONSTRUCTION SITES

401 KAR 4, 5, 10 and Kentucky Pollutant Discharge Elimination System (KPDES) PERMIT

POSSIBLE AREAS OF CONCERN

Failure to install and properly maintain BMP's on construction sites will lead to violations of the storm water KPDES Permit.

CHARACTERIZATION

Fort Knox operates under a KPDES permit and uses a Storm Water/Groundwater Pollution Prevention Plan BMP to ensure compliance with water regulations and protect the storm and ground water at Fort Knox. Construction sites are required to use BMPs pursuant to the KY Storm Water regulations and Best Management Practices Guidelines.

HANDLING PROCEDURES

- Step 1** Contractors, units, and organizations involved in construction with excavation are required to have a KY Certified Qualified Inspector. Activities doing work on Fort Knox are required to notify EMD and not the State of Kentucky for permitting.
- Step 2** All construction sites will have a Storm Water/Groundwater Pollution Prevention Plan.
- Step 3** All construction sites will be inspected per KY Storm Water regulations using the form available from EMD or an equivalent form.

Note: Guidance information on a Construction Site Storm Water and Groundwater Plan is available at the KY Division of Water website or Fort Knox EMD.



GENERAL INFORMATION

For additional information contact the EMD at 502-624-8187/6057.

SOLID WASTE CD/D LANDFILL

401 KAR 48 and 49

POSSIBLE AREAS OF CONCERN

We fail to meet the Fort Knox Solid Waste Management mission to protect the environment and conserve natural resources by maximizing the diversion of materials from the solid waste stream and increasing awareness of the benefits of recycling, saving appropriated funds, generate revenue, and operating the program in the most efficient manner.

CHARACTERIZATION

Fort Knox operates by contract, a state permitted Construction/Demolition Debris (CD/D) Landfill located on Baker Road. CD/D is waste generated from construction, demolition, and renovations. Storm related debris is also considered CD/D.

HANDLING PROCEDURES

- Step 1** Contractors, units, organizations, and activities may utilize the landfill.
- Step 2** Authorized use of the landfill requires the user to transport their own waste to the landfill.
- Step 3** Refuse/trash generated on-post by family housing, dining facilities, administrative and maintenance facilities is collected by a contractor, and transported off-post for disposal.



**FORT KNOX SOLID WASTE
LANDIFLL 502-942-9511**

GENERAL INFORMATION

For additional information contact the EMD at 502-624-3692/8379.

SPILL RESPONSE MATERIALS

40 CFR 112 and OSHA 29 CFR 1910

POSSIBLE AREAS OF CONCERN

Some stored spill absorbents may dry rot over time and not be usable. Spill materials are used and not restocked.

CHARACTERIZATION

It is necessary to conduct monthly inventories of your spill materials to ensure usability and availability. All POL and hazardous materials storage buildings, conex will maintain an appropriate supply of spill response materials. Units going to any range or training area will have sufficient spill kit supplies to contain a 100 gallon spill at a minimum.

HANDLING PROCEDURES

DRIP PADS

- ✓ Vehicles (leaking only)
- ✓ Equipment (leaking only)
- ✓ Make arrangements to repair leaks



SPILL CONTAINMENT PALLETS

- ✓ Drums (30/55 Gallon)
- ✓ Batteries
- ✓ Fuel Containers (5 Gallon)
- ✓ Chemical Containers (5 Gallon)



WHITE PADS AND SOCKS

- ✓ Pads will float for light oil sheens on water
- ✓ Socks will absorb POL liquids but not water
- > **USE AROUND STORM OR SEWER DRAINS**



GRAY PADS AND SOCKS

- ✓ Socks will absorb ALL liquids
- ✓ Will not float



DO NOT PLACE AROUND STORM OR SEWER DRAINS—WILL HOLD WATER

BOOMS 5' to 10'

- ✓ Use on water surfaces
- ✓ Use on concrete surfaces to divert large spills
- ✓ Will absorb POL and float
- ✓ Made to be hooked in chain form if needed



ACID NEUTRALIZATION

- ✓ Dry absorbent will neutralize and absorb
- ✓ Pads will neutralize and encapsulate



NATURE'S BROOM ABSORBENT

- ✓ POL Products
- ✓ NOT FOR CREATING DAMS

CLAY ABSORBENT

- ✓ POL products
- ✓ Create dams around stormwater/sewer drains in front of socks or booms

CLEAN UP

YELLOW OR BLACK PLASTIC BAGS

- ✓ Use the yellow bag in your spill kit for disposal
- ✓ You can use a heavy duty black plastic bag
- ✓ Double black bags
- ✓ Dispose of at the landfill
- ✓ Check with landfill office where to place the used absorbent



TOOLS

- Gloves & Tyvex Suits
- Brooms & Shovels (plastic and metal)
- Rakes & Trash cans or drums

GENERAL INFORMATION

Spill kits are available for purchase at Ability One, building 1717. For additional information contact EMD at 502-624-8187/6057.

TIRES

401 KAR 48 and 49

POSSIBLE AREAS OF CONCERN

Tires cannot be abandoned on post. Abandoned tires collect rainwater and create breeding areas for mosquitos.

CHARACTERIZATION

Vehicle and equipment tires are made of recyclable materials.

HANDLING PROCEDURES

Step 1 Military equipment/vehicle tires will be turned in to DRMS. Call 502-626-3769 to schedule a drop off. Tires that are stored pending disposal must be covered.

Step 2 All other tires can be turned in to the Fort Knox Landfill. Contact the Fort Knox Landfill at 502-942-9511 to arrange drop off.

Note: Tires from off-post cannot be taken to the Fort Knox Landfill.



GENERAL INFORMATION

For additional information contact EMD at 502-624-3692 or the Fort Knox Landfill at 502-942-9511.

WASH RACK

MILITARY VEHICLES

401 KAR 4, 5, 10 and KPDES PERMIT

POSSIBLE AREAS OF CONCERN

Illegal dumping of pollutants into wash rack drains or surrounding areas may occur and pose a threat to the environment and/or create a potential violation with local, state, federal, and Fort Knox regulations.

CHARACTERIZATION

The wash rack should be used to remove heavy dirt and mud from vehicles.

HANDLING PROCEDURES

- Step 1** Follow the posted instructions at the wash rack located at Wilson and Frazier Road.
- Step 2** Move drip pads or pans away from the vehicle washing area.
- Step 3** Place oily rags in the provided containers.

Note:

- No purging of tankers or HEMTT tankers shall be performed on any wash racks.
- No fuel transfers shall be performed on any wash racks.
- No defueling or refueling shall take place on any wash racks.
- No oil changing of any vehicles or equipment shall take place on any wash racks.
- No vehicle washing shall take place on aircraft wash racks.
- No detergents are allowed on any wash rack.



Note: Call 502-624-7213 or 502-624-2063 to schedule use of the wash rack.

GENERAL INFORMATION

For additional information about wash racks contact EMD at 502-624-8187/6057.

WATER PURIFICATION OPERATIONS

401 KAR 4, 5, 10 and KPDES PERMIT

POSSIBLE AREAS OF CONCERN

Chlorine Residual in excess of 3 PPM and other chemicals that are added or used during field water operations may have an impact on the environment. The use, storage and transportation of bulk treatment chemicals can create a hazard to individuals and the environment.

CHARACTERIZATION

All water field missions must be approved by EMD. These missions may include, Reverse Osmosis Water Purification Unit (ROWPU), Tactical Water Purifications Systems (TWPS), Lightweight Water Purification (LWP) System, Chemical Decontamination, Laundry & Bath, and Field Food Service. Daily water withdrawals of 10,000 gallons or more from a lake or stream requires a permit from the Kentucky Division of Water.

HANDLING PROCEDURES

- Step 1** At least ten (10) working days prior to beginning a water field mission/exercise, contact EMD or Natural Resources for guidance.
- Step 2** Units must be briefed on field water production.
- Step 3** Units must notify EMD when the field exercise is completed.

Note: Unit must contact the EMD for disposal/discharge guidelines when the chlorine residual is greater than 3 PPM or if the backwash water is generated from a TWPS/LWP element.

Chlorine residual less than 3 PPM, field food service water or DECON water may be released to the environment by spraying the water onto ground covered with vegetation, at least 200 yards away from any creeks/streams of Kentucky. These water materials must not be discharged back into the original water sources.

Note: Tents and CAMO netting may be washed at the main vehicle wash rack



Water/Onion Bags

GENERAL INFORMATION

For additional guidance contact EMD at 502-624-8187/6057.

WEAPONS CLEANING MATERIALS

401 KAR 31, 32, 33 and 40 CFR 260-262

POSSIBLE AREAS OF CONCERN

The lead contaminated weapon patches, Q-Tips, and pipe cleaners are disposed of in the trash and may create a potential non-compliance with waste disposal regulations.

CHARACTERIZATION

There is residual lead powder in the various parts of the weapon (s).

HANDLING PROCEDURES

Step 1 Contact EMD at 502-624-8379/6598 to set up a Satellite Accumulation Point (SAP).

Step 2 Schedule SAP Manager training with EMD.

Step 3 EMD will properly label the container as hazardous waste and place at or near the point of generation.

Step 4 Place the lead contaminated materials in the SAP container consisting of lead contaminated weapon patches, Q-Tips, and pipe cleaners.

Step 5 Keep the SAP container closed when not in use.

Step 6 Contact EMD when the SAP container is full.



Note: Visiting units must contact EMD at 502-624-8379/6598 to obtain a container for collecting used weapon cleaning materials.

GENERAL INFORMATION

Contact EMD at 502-624-8379/6598 for additional information.

APPENDIX A - AIR

KY DIVISION FOR AIR QUALITY REGULATIONS, AND THE **FORT KNOX AIR PERMIT**

Fort Knox operates under a Clean Air Act Title V Operating Permit. This permit is issued by the Commonwealth of Kentucky through the authority of the Environmental Protection Agency. Title V permits are issued to major sources of air pollutants and contain operating and emission limits, as well as monitoring and recordkeeping requirements. This permit applies to every source of air pollutants on Ft. Knox, well over 2,000.

Examples of sources of air pollutants found on Ft. Knox are emergency and non-emergency generators, boilers, spray painting, parts washers, Motor Vehicle Air Conditioning (MVAC), refrigerant recycling, welding, woodworking, cooling towers, and many various other processes. No new air emission source may be constructed or brought onto Ft. Knox without prior approval of Ft. Knox EMD. Contact EMD at 502-624-8263/8161.

REQUIREMENTS

Any unit that operates a permitted source must observe all operating limits, and complete various monitoring and recordkeeping documents. Copies of all records should be submitted to Ft. Knox EMD.

Generators - Hours of operation and records of fuel tank loading/refilling must be maintained. Records of all preventive maintenance performed on the engine or generator must also be maintained.

Painting – Records of the type and amount of paint/CARC, spray paint, solvent, and thinner being used, excluding any paint used on structures or buildings, must be maintained. Any painting of greater than 5 gallons per day must be done in the Boatwright (Bldg. 2778) Paint Booth.

Parts Washers – Lids must be closed at all times when the parts washers are not in use. The operating procedures found on the washer label must be followed. The washer must be used in a manner that prohibits splashing or excessive solvent loss.

MVAC/Refrigerant Use – All operators of MVAC or refrigerant recycling equipment must be trained by an EPA certified organization. Copies of all certifications must be kept on file. All new MVAC or recycling equipment must be registered with EPA Region IV prior to use by EMD.

Woodworking – Records of the amount of wood being used, in board feet, must be maintained.

Welding – Records of the amount and type of rod, spool, and flux used must be maintained.

Contact EMD at 502-624-8263/8161 for clarification of clean air requirements, and for information on the forms and reports used for the Clean Air Program.

APPENDIX B
BULK STORAGE CONTAINERS (BSCs)
&
SPILL PREVENTION CONTROL & COUNTERMEASURES
PLAN (SPCCP)
40 CFR 112

BSCs are required to be double-walled with interstitial space monitoring (electronically or manually) or have secondary containment with an overhead enclosure to protect the BSC secondary containment from collecting rain water.

40CFR112

40CFR112 provides the requirements for BSCs in a final rule and applies to Oil Pollution Prevention and Response relevant to Non-Transportation-Related Onshore and Offshore Facilities under,

112.1 General Applicability.

(a)(1) This part establishes procedures, methods, equipment, and other requirements to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or upon the navigable waters of the United States or adjoining shorelines, or into or upon the waters of the contiguous zone, or in connection with activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of 1974, or that may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Magnuson Fishery Conservation and Management Act).

Part 112 Does Apply to Fort Knox

Non-transportation related facilities which, due to their location could reasonably be expected to discharge oil (includes vegetable oil and animal fats) into or upon the navigable waters of the United States or adjoining shorelines.

Bulk Storage Container (BSC)

BSCs include containers with a volume of 55 gallons or larger and requires some form of secondary containment. All BSCs must be visually inspected for leaks.

BSCs can be double-walled or dual-walled which has an interstitial space designed to trap any liquid that may leak from the main tank holding the product.

BSCs may be single-walled but must have secondary containment, such as, a concrete or steel berm. The bermed area must have a means for releasing captured rainfall, such as a manual valve. Keep the valve

Some BSCs may have interstitial space gauges that are controlled by vacuum between the double-wall. Make sure the gauge is reading a vacuum pressure.



Some BSCs may have a manual check for the interstitial space. This check may be a screw out bung or a dip stick.



Grease Containers

The interstitial space check for these Grease Containers is located under the main cover. It is a removable 1 inch bung. Some Grease Containers have a sight glass located in the lower right or left bottom interstitial space drain bung.



Secondary Containment

The secondary containment for these tanks is the enclosed area around the tanks and may have valves (normally closed) for draining any collected liquid. Some of these tanks may have open top secondary containment areas with valves (normally closed) for draining any collected liquid or rainwater.



These BSCs have curtain systems attached to each BSC to collect in liquids that may leak from the main tank. The curtain systems may or may not be closed at the top of the BSC.



55 GALLON CONTAINERS - STORAGE



55 gallon containers can be stored in clam shells for protection from the weather.



55 gallon containers should be placed on spill containment pallets for storage inside.



55 gallon drums can be stored in a HAZMAT shed which has built-in secondary containment.



55 gallon drums can be stored outside with secondary containment. Make sure you can capture rainwater.



Do not store 55 gallon drums inside next to drains. These should be on a spill containment pallet.



Do not store 55 gallon drums outside on pallets without some form of covering.

SPILL PREVENTION CONTROL & COUNTERMEASURES PLAN (SPCCP)

40CFR112 requires an SPCCP for all POL storage facilities, including vegetable oils and animal fats. Each site plan must detail the equipment, workforce, procedures, and steps to prevent, control, and provide adequate countermeasures to a discharge. The SPCCP must be certified by a Professional Engineer (PE).

Each site plan will include the following,

- Facility Description
- Facility Map/Diagram with Container Location and Rainfall Flow Direction
- Preventive Inspections for BSCs, HAZMAT Sheds, and Other Storage Units
- Security Measures
- Good Housekeeping Practices
- Spill Prevention Training
- Spill Response Personnel
- Spill Types and Countermeasures
- Flow Prediction for Interior Drains and BSC/HAZMAT Runoff Areas
- Spill Response Resources
- Spill Response Reporting

EMD provides the site specific plans along with the required training, included in the EO Emergency Response and Spill training program.

BULK STORAGE CONTAINER INSPECTIONS

BSC Inspection Form FK5009

With this form you can record inspections for 6 large containers. You determine the ID information, tag number, and container description, etc.

Section I

Section I covers the integrity of the large container, the status of the interstitial space and other larger container related conditions and operations.

Section II

Section II covers the condition of the large container secondary containment. Cracks and breaks in the secondary containment area create a potential for ground water contamination. You must place a service order or work order for repair. A repair now will ensure the avoidance of future environmental liability, i.e., boring for samples, sample analysis, and possible excavation and cleanup.

Section III

Section III applies to all 55 gallon containers, both inside and outside. 55 gallon containers stored outside must be covered (clam shell, hard cover or tarp) and in a bermed area or HAZAT Shed. 55 gallon containers stored inside must be on containment pallets and if possible away from all building exit doors and floor drains.

You can group inspections of 55 gallon drums where you have several in a bermed area, under a hard cover, in clam shells, or covered with a tarp. Also, 55 gallon drums stored inside on 2 or 4 drum containment pallets can be inspected as groups.

Section IV

Section IV has specific instructions about the understanding and use of this form.

Section V

Use this section to record the need for service orders or work orders. Be sure to include the large container or 55 gallon drum(s) identification and location information. Also, if you discover expired product record the information in this section and make arrangements turn in for disposal.

Also, use this section to record a service order or work order for repair work to interstitial space gauges or monitoring devices and secondary containment deficiencies.

NOTE: All BSC installations must meet state and local fire codes. You should contact the Fire Department for guidance.

NOTE: All discovered BSC deficiencies must have a Work/Service Order issued for the proper repair. See Appendix P for work/service order instructions.

APPENDIX C

CULTURAL RESOURCES

AR 200-4, AR 210-190, and DA Pam 200-4

Fort Knox features a broad assortment of cultural resources. The Fort Knox Cantonment Historic District contains 181 buildings constructed during the 1930s and 1940s. Four other buildings, Cavalry Chapel, Hanger 1, Landing Ship Tank (LST) Building, and the Old Guest House (Building # 4248) are eligible for the National Register of Historic Places (NRHP). One property, a one-mile segment of the Louisville and Nashville Turnpike (Bridges to the Past) is listed on the NRHP. Tioga Falls Trail is co-located with Bridges to the Past off US 31W near the town of West Point. Both trails are open to the public. Over 1100 archaeological sites have been identified at Fort Knox. Two of these are eligible for the NRHP and another 87 are potentially eligible. A total of 120 historic cemeteries have been identified on Fort Knox and it is likely that numerous others have yet to be identified.

Federal policy regarding preservation of cultural resources (i.e., archaeological sites, cemeteries, historic sites, structures and districts) is established in numerous laws, regulations and executive orders. The most important of these in terms of installation management are the National Historic Preservation Act (NHPA) and the Archaeological Resources Protection Act (ARPA).

Fort Knox's cultural resources are managed in accordance with the *Fort Knox Integrated Cultural Resources Management Plan*. Specific guidance for maintaining historic buildings is specified in the *Fort Knox Standards for the Treatment of Historic Buildings*.

In accordance with the NHPA all federal undertakings that have the potential to affect historic properties must be reviewed by the Environmental Management Division. This includes construction, maintenance and repair projects within the Fort Knox Cantonment Historic District, or that affect any buildings over 50 years old. This also applies to any ground-disturbing activities (digging) on post. Projects that are determined to have the potential to affect historic properties must be reviewed in consultation with the Kentucky State Historic Preservation Office (SHPO). Project proponents should allow 45 days for SHPO review.

All excavations on post require dig permits. Dig permits must be coordinated with the EMD Cultural Resources Office (see page 39). If ground-disturbing activities inadvertently encounter archaeological materials, archaeological deposits or features, all work in the vicinity of the finds must cease. The Fort Knox Cultural Resources Office shall be notified. Also, if human remains are discovered, all work in the vicinity of the remains must cease, the area must be secured and declared off-limits to unauthorized personnel, and the Fort Knox Cultural Resources Office, the State Medical Examiner and Fort Knox Law Enforcement Command must be notified. Use of metal detectors is prohibited under ARPA, as is collecting artifacts or damaging archaeological sites.

GENERAL INFORMATION

The POC for Cultural Resources Management can be contacted at 624-6581.

An inventory of historic buildings is located at the EMD website:

<http://www.knox.army.mil/Garrison/dpw/emd/Default.aspx>

APPENDIX D

ENVIRONMENTAL COMPLIANCE FORMS

Forms are available from EMD:
army.knox.emd@mail.mil

Monthly Inspection Forms

Bulk Storage Containers (BSCs) Fuel Dispensing Areas	
Monthly Inspections- 2 pages – 67 & 68	FK5009 DEC2013
Spill Containment Pallet / Bulk Package / Hazard Storage Area	
Monthly Inspections- 2 pages – 69 & 70	FK5058 23DEC15

Spill Incident Report

Spill Incident Report- 2 pages 71 & 72	FK5053 FINAL
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Regulated Waste Worksheets/Forms

Regulated Waste Information Worksheet- 2 pages 73 & 74	FK6175 SEP2015
UNIVERSAL WASTE Universal Waste Collection Area	
Monthly Inspection- 2 pages 75 & 76	FK5011 15DEC15
HAZARDOUS WASTE Satellite Accumulation Point	
Monthly Inspection- 2 pages 77 & 78	FK5013 15DEC15

Storm Water/Groundwater Pollution Prevention

Storm Water Pollution Prevention Monthly Checklist-	
2 pages 79 & 80	FK5111 23DEC15

Compliance and EMS Inspections

Available from EMD

**BULK STORAGE CONTAINERS (BSCs)
MONTHLY CHECKLIST**

DATE:	INSPECTOR:	UNIT/ACTIVITY:	AREA OR SITE:
--------------	-------------------	-----------------------	----------------------

	CHECKLIST ITEM	Tank ID					
A	BULK STORAGE CONTAINERS (BSCs)						
1	Are there any signs of leaks, rusting or damage to the pipes, valves, supporting structures or tank shell?	Yes _____ No _____ NA _____					
2	Is there any evidence of liquid (fuel or water) in the interstitial space (space between tank walls) (double-walled tanks only)?	Yes _____ No _____ NA _____					
3	Are overhead arms, hoses, and pumps operating properly?	Yes _____ No _____ NA _____					
4	Are the gauges and valves working properly?	Yes _____ No _____ NA _____					
5	Are the emergency leak detection systems including leak devices used for the interstitial space working?	Yes _____ No _____ NA _____					
6	Are there any obstructions or restrictions to the normal and emergency vents that prevent normal function?	Yes _____ No _____ NA _____					
7	Is the tank foundation intact and sound?	Yes _____ No _____ NA _____					
B	SECONDARY CONTAINMENT SYSTEM						
8	Is there any evidence of cracks or holes in the drainage system such as in concrete berms, spill catch basins, or concrete ditches?	Yes _____ No _____ NA _____					
9	Is the drainage valve closed except when discharging rainwater or is the drain without a valve covered except for discharging rainwater?	Yes _____ No _____ NA _____					
10	If rainwater has accumulated, is there any floating oil debris in the secondary containment structure?	Yes _____ No _____ NA _____					
11	Are there any obstructions, such as accumulated debris blocking drainage pipes and/or drain openings?	Yes _____ No _____ NA _____					
12	Is spill kit present and stocked?	Yes _____ No _____ NA _____					



ENVIRONMENTAL HANDBOOK Issue 016 Ver. 01

SPILL CONTAINMENT PALLET/BULK/PACKAGE/HAZARD STORAGE AREA MONTHLY INSPECTION (23DEC15)							
DATE:	INSPECTOR:	UNIT/ACTIVITY:			AREA OR SITE:		
CHECKLIST ITEM	Storage ID	Storage ID	Storage ID	Storage ID	Storage ID	Storage ID	
Questions apply to each storage location.							
1	Is the flammable cabinet or HAZMAT shed in good condition?	Yes _____ No _____ NA _____					
2	Are cabinet or shed doors closed at all times except when adding or removing materials?	Yes _____ No _____ NA _____					
3	If the spill containment sump has a drainage valve or plug, is the valve or plug closed?	Yes _____ No _____ NA _____					
4	Does the surrounding drainage area, concrete berms, ditches, or secondary containment show any evidence of cracks or holes?	Yes _____ No _____ NA _____					
5	Is there a spill kit in the immediate area?	Yes _____ No _____ NA _____					
6	Does the spill kit have adequate spill response materials?	Yes _____ No _____ NA _____					
7	Is your HAZMAT shed locked when not in use?	Yes _____ No _____ NA _____					
8	Are SDSs readily available for the materials in the cabinet or shed?	Yes _____ No _____ NA _____					
9	Is there a 14 day supply or less of all materials? Army Regulation limits you to a 14 day supply or less.	Yes _____ No _____ NA _____					
10	Is a chemical inventory posted on each cabinet or shed door?	Yes _____ No _____ NA _____					
11	Is the stock rotated so the oldest stock is issued (used) first?	Yes _____ No _____ NA _____					
12	Are package products, boxes, or drums stored on pallets?	Yes _____ No _____ NA _____					
13	Are there any noticeable problems with the material container integrity such as rusting or leaking?	Yes _____ No _____ NA _____					
14	Are all material containers serviceable?	Yes _____ No _____ NA _____					

ENVIRONMENTAL HANDBOOK Issue 016 Ver. 01

SPILL INCIDENT REPORT				
See page 2 below or on the back of this page for INSTRUCTIONS on completing this form.				
1				
2	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Complete this report for any spill of OIL, HAZARDOUS MATERIALS, HAZARDOUS WASTE, AIR RELEASES, or any substance which is a threat to humans or the environment.</p> </div> <div style="width: 50%;"> <p>The information is to be provided immediately to:</p> <p>a. The Environmental Management Division (EMD), 624-3629 b. The Fort Knox Fire Department 624-6016/1876 c. Range Control 624-2125 for Training Areas</p> </div> </div>			
3	Identification Information			
4	Complete the Information Below			
5	Date			
6	Time of Call In			
7	Caller Name			
8	Caller Telephone No.			
9	Unit/Activity/Organization			
10	POC at Spill Scene			
11	Location (building/street intersection/grid coordinate)			
12	When did Spill Occur (TIME)			
13	Material Spilled/Released			
14	Quantity of Material Spilled or Released (QTS.-GALS.-LBS.)			
15	Source			
16	Cause			
17	IMPACT/MEDIA (spilled on grass, asphalt, concrete, dirt) (health, safety, environment)(in a waterway, storm drain)(sheen on water)			
18	WEATHER CONDITIONS			
19	Describe the current weather conditions.			
20	a Temperature			
21	b Rain or Snow			
22	c Sunny or Cloudy			
23	d Windy (light breeze, moderate or high wind, no wind)			
24	Danger or Threat Posed by the Spill or Release			
25	Number and Types of Injuries or fatalities (if any)			
26	If Injuries or Fatalities, was Post Safety Notified? (Yes or No) If Yes, Who was Notified?			
27	Has an Evacuation Occurred? (Yes or No) If yes, explain.			
28	Were Vehicles Involved? (Yes or No) If Yes Explain.			
29	CORRECTIVE ACTION			
30	DISPOSAL INFORMATION (Landfill, Other)			
31	Does the Emergency Preparedness and Response Plan require changes as a result of this spill incident?			
32	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; border: 1px solid black;">YES _____</td> <td style="width: 33%; border: 1px solid black;">NO _____</td> <td style="width: 34%; border: 1px solid black;">If yes, contact EMD - 624-3629</td> </tr> </table>	YES _____	NO _____	If yes, contact EMD - 624-3629
YES _____	NO _____	If yes, contact EMD - 624-3629		
33	COMMENTS			
34	UNIT/ACTIVITY POC PRINTED NAME			
35	UNIT/ACTIVITY POC SIGNATURE AND DATE			
36	Date: _____			
37	EMD POC PRINTED NAME			
38	EMD POC SIGNATURE AND DATE			
39	Date: _____			
40	FK5053-N FINAL			

ENVIRONMENTAL HANDBOOK Issue 016 Ver. 01

INSTRUCTIONS	
1	INSTRUCTIONS
2	<p>Complete this report for any spill of OIL, HAZARDOUS MATERIALS, HAZARDOUS WASTE, AIR RELEASES, or any substance which is a threat to humans or the environment.</p> <p style="text-align: right;">The information is to be provided immediately to:</p> <p>a. The Environmental Management Division (EMD), 624-3629 b. The Fort Knox Fire Department 624-6016/1876 c. Range Control 624-2125 for Training Areas</p>
3	Identification Information
4	Complete the Information Below
5	Date <i>Actual date of spill</i>
6	Time of Call In <i>Actual time you received or reported the spill to EMD</i>
7	Caller Name <i>Name with Rank or Title</i>
8	Caller Telephone No. <i>Your phone number</i>
9	Unit/Activity/Organization <i>Your unit/organization</i>
10	POC at Spill Scene <i>The on site person controlling the spill scene</i>
11	Location (building/street intersection/grid coordinate) <i>Building number, street address, grid location</i>
12	When did Spill Occur (TIME) <i>The time the spill actually happened</i>
13	Material Spilled/Released <i>Name or names of materials spilled</i>
14	Quantity of Material Spilled or Released (QTS.-GALS.-LBS.) <i>Best estimate of quantity</i>
15	Source <i>Actual starting point of the spill</i>
16	Cause <i>Identify what created the spill or where it came from</i>
17	IMPACT/MEDIA (spilled on grass, asphalt, concrete, dirt) (health, safety, environment)(in a waterway, storm drain)(sheen on water) <i>Describe what the material came in contact with, gravel, concrete, grass, dirt, waterway, and estimate the size of the spill</i>
18	WEATHER CONDITIONS
19	<i>Describe the current weather conditions.</i>
a	Temperature
b	Rain or Snow
c	Sunny or Cloudy
d	Windy (light breeze, moderate or high wind, no wind)
20	Danger or Threat Posed by the Spill or Release <i>EXPLAIN THE DANGER OR THREAT POSED</i>
21	Number and Types of Injuries or fatalities (if any) <i>COMPLETE IF THIS APPLIES AT THIS SPILL</i>
22	If Injuries or Fatalities, was Post Safety Notified? (Yes or No) If Yes, Who was Notified? <i>INDICATE WHO YOU CALLED (POST SAFETY, MPs, FIRE DEPT.)</i>
23	Has an Evacuation Occurred? (Yes or No) If yes, explain. <i>Provide details of any evacuation</i>
24	Were Vehicles Involved? (Yes or No) <i>If yes, contact EMD - 624-3629</i> <i>If yes, contact EMD - 624-3629</i>
25	CORRECTIVE ACTION
26	<i>Explain cleanup and any protective measures taken to minimize impact.</i>
27	DISPOSAL INFORMATION (Landfill, Other)
28	<i>Explain how you disposed of the cleanup materials.</i>
29	Does the Emergency Preparedness and Response Plan require changes as a result of this spill incident? YES _____ NO _____ <i>If yes, contact EMD - 624-3629</i>
30	COMMENTS
31	<i>Add any supporting information about the spill or release.</i>
32	UNIT/ACTIVITY POC PRINTED NAME
33	UNIT/ACTIVITY POC SIGNATURE AND DATE Date: _____
34	EMD POC PRINTED NAME
35	EMD POC SIGNATURE AND DATE Date: _____
36	FK5053 FINAL

REGULATED WASTE INFORMATION WORKSHEET (Includes all waste, hazardous, non-hazardous, universal, special, and other)	
UNIT/ORGANIZATION: _____	BLDG #: _____
DODAC #: _____	POC: _____
PHONE NUMBER: _____	ALTERNATE: _____
ALL INFORMATION MUST BE TAKEN FROM THE CONTAINER, NOT THE SAFETY DATA SHEET (SDS) Fax to Environmental Management Division (EMD) 502-624-3000	
1. FEDERAL STOCK NUMBER/NATIONAL STOCK NUMBER (NSN) (13 Digits): _____	
2. PART NUMBER/CATALOG NUMBER: _____	
3. NAME OF ITEM: _____	
4. MANUFACTURER/CAGE NUMBER: _____	
5. MIL-SPEC NUMBER (Example: Mil-M-2401B): _____	
6. TYPE OF CONTAINER: <input type="checkbox"/> 55 GAL. Metal Drum <input type="checkbox"/> 30 GAL. Metal Drum <input type="checkbox"/> 5 GAL. Plastic <input type="checkbox"/> Fiber Drum <input type="checkbox"/> Box <input type="checkbox"/> Other (Explain) _____	
7. NUMBER OF INDIVIDUAL CONTAINERS: _____	
8. HOW FULL IS THE CONTAINER: <input type="checkbox"/> 1/4 <input type="checkbox"/> 1/3 <input type="checkbox"/> 1/2 <input type="checkbox"/> 3/4 <input type="checkbox"/> FULL	
9. LIST ALL INGREDIENTS PER THE CONTAINER on THE ORIGINAL PRODUCT LABEL: _____ _____	
10. CONTENTS (check one): <input type="checkbox"/> LIQUID <input type="checkbox"/> SOLID <input type="checkbox"/> PASTE/SLUDGE	
11. List these characteristics. _____ pH _____ FLASHPOINT (F)	
12. REASON FOR DISPOSAL: _____ _____ _____	
13. POC SIGNATURE _____	DATE: _____
14. EMD COMMENTS: _____ _____ _____	
PROFILE NUMBER: _____	CLIN: _____
LBS. _____	GALS. _____
EMD DOCUMENT NUMBER: _____	
_____	_____
EMD APPROVAL	DATE

ENVIRONMENTAL HANDBOOK Issue 016 Ver. 01

	UNIVERSAL WASTE COLLECTION AREA (UWCA) MONTHLY INSPECTION	DATE	INSPECTOR	UNIT/ACTIVITY	AREA OR SITE	Fax to Environmental Management Division (EMD) 624-5000	
#	UWCA SITES	UWCA Site Location or ID	UWCA Site Location or ID				
A	CHECKLIST ITEM (Enter Yes, No or NA for each Question or Comment)						
1	All UW generated at the facility is being reported to EMD?						
2	Are UW storage points diked, bermed, and/or covered?						
3	Is incompatible UW properly contained and stored separately?						
4	Is UW at or near generation point?						
5	Is UW within the operator's control to prevent mixing?						
6	Are the containers in good condition?						
7	Are the containers closed except when adding or removing?						
8	Is there D.O.T. packaging?						
9	Are there any leaks?						
10	Is "Universal Waste" marked on container?						
11	Is there a collection start date on the container.						
12	Intentionally Blank						
13	INSPECTOR'S OVERALL COMMENTS						
14	REMEDIAL ACTIONS TAKEN						

ENVIRONMENTAL HANDBOOK Issue 016 Ver. 01

	HAZARDOUS WASTE SAP MONTHLY INSPECTION	<u>DATE</u>	<u>INSPECTOR</u>	<u>UNIT/ACTIVITY</u>	<u>AREA OR SITE</u>	Fax to Environmental Management Division (EMD) 624-3000	
#	SAP SITES	SAP Site Location or ID	SAP Site Location or ID				
A	CHECKLIST ITEM (Enter Yes, No or NA for each Question or Comment)						
1	All HW generated at the facility is being reported to EMD?						
2	Are HW storage points diked, bermed, and/or covered?						
3	Is incompatible HW properly contained and stored separately?						
4	Is there a maximum of 55 gallons of HW?						
5	Is there a maximum of 1 Quart of acutely HW?						
6	Is HW at or near the generation point?						
7	Is HW within the operator's control to prevent mixing?						
8	Are containers in good condition?						
9	Are containers closed except when adding or removing HW?						
10	Is there D.O.T. packaging?						
11	Are there any leaks?						
12	Is "Hazardous Waste" marked on the container?						
13	Intentionally Blank						
14	INSPECTOR'S OVERALL COMMENTS						
15	REMEDIAL ACTIONS TAKEN						

ENVIRONMENTAL HANDBOOK Issue 016 Ver. 01

B	SAP FORM INSTRUCTIONS	
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
C	GENERAL COMMENTS	

ENVIRONMENTAL HANDBOOK Issue 016 Ver. 01

FORT KNOX STORM WATER/GROUNDWATER POLLUTION PREVENTION		FACILITY/SITE:	
MONTHLY CHECKLIST (KPDES PERMIT & 401KAR5:037) FINAL 23DEC15		INSPECTOR:	
BUILDING:			
MONTH:		YEAR:	
ANSWER WITH A YES, NO or NA (explain no answers).			
I.	STORMWATER SITE PLAN	Status	COMMENTS
a.	Storm Water Pollution Prevention Plan and Best Management Plan is on site and current.		
b.	Site or facility personnel know where the Storm Water Plan and Best Management Plan are stored.		
c.	Unpaved areas are checked for erosion.		
d.	Erosion issues are covered by a work/service order. See Appendix N Ft. Knox Enviro.Handbook		
e.	Sediment is not washed into storm drains, ditches, or outfalls.		
f.	If necessary, sediment is removed and properly disposed of.		
g.	Ditches, storm drains, and outfalls are free of debris, trash, and weeds.		
h.	If necessary, debris, trash and weeds are removed and properly disposed of.		
i.	Oil Water Separators with a Stormwater Discharge are operating correctly (no oily stains at stormwater discharge points)		
j.	Spills are recorded in the Stormwater Site Plan.		
II.	SPILL PREVENTION	Status	COMMENTS
a.	Site specific Spill Prevention Control & Countermeasures Plan is available.		
b.	Emergency contact list is posted.		
c.	Fort Knox Spill Contingency Plan(s) (SCP) or organization emergency procedure is current and posted at main doors.		
d.	Spill kits have been checked and are properly stocked.		
e.	Spills are properly cleaned up, reported, and recorded.		
III.	CHEMICAL STORAGE & GENERAL STORAGE	Status	COMMENTS
a.	Potential pollutant materials are stored in bermed and roofed areas.		
b.	Chemicals and lubricants are stored inside away from floor drains and exit doors or outside under cover to protect these from storm water.		
c.	Potential areas with pollutant materials are not washed down.		
d.	Batteries are stored on secondary containment (spill pallets)		
e.	Compatible materials are stored correctly in HAZMAT sheds, outbuildings, and Flammable Cabinets.		
f.	Incompatible materials are not stored together.		
IV.	DRIP PADS	Status	COMMENTS
a.	Drip pads are being used to contain vehicle leaks.		
b.	Drip pads are checked to ensure there is no spillage on the ground.		
c.	Drip pads are checked after a rainfall event and changed as needed.		
V.	WASH RACKS (If applicable)	Status	COMMENTS
a.	Wash racks are properly used and maintained.		
VI.	USED OIL & ANTIFREEZE STORAGE	Status	COMMENTS
a.	Used oil and used antifreeze are collected and stored in the proper containers.		
b.	Used oil and used antifreeze collection containers are clearly marked, checked, and regularly emptied to prevent overfilling.		
VII.	TRASH AND RECYCLE DUMPSTERS (ROLLOFFS)	Status	COMMENTS
a.	Trash dumpster tops are closed.		
b.	Recycle dumpster tops are closed.		
c.	Trash is not mixed with recyclables.		
d.	Solid Waste is managed per the Fort Knox Solid Waste Management Plan.		

APPENDIX E
ENVIRONMENTAL MANAGEMENT SYSTEM (EMS)
&
SUSTAINABILITY
Executive Order 13693 and AR200-1

This section is designed to acquaint the user with the **Environmental Management System (EMS)**. Implementation of the EMS is in conformance with the **Standards of ISO 14001**. Questions regarding EMS should be directed to the Environmental Management Division (EMD) at 502-624-8672/6057. E-mail questions to: army.knox.emd@mail.mil

What is ISO 14000? ISO 14000 is the generic term for the series of international standards for environmental management. The standard for an EMS is ISO 14001. The ISO 14001 standard was updated on 15 September 2015 and includes more additional requirements.

The ISO 14001 standard was developed in response to increased concern over industry's impact on the environment. Today there are more than 6,000 companies worldwide that have adopted the ISO 14001 standard - over 350 of these companies are in the United States.

Why is the Army involved with ISO 14001? The Department of Defense Services (DoD) conducted pilot studies in 1998-1999 to determine if ISO 14001 had applicability within DoD as the standard for an EMS. When the President signed Executive Order 13148 (Greening the Government through Leadership in Environmental Management) on 22 April 2000, it required federal agencies to implement an EMS at appropriate facilities by 31 December 2005. Effective with a memorandum from the Deputy Assistant Secretary of the Army, dated 13 July 2001, and the Assistant Chief of Staff for Installation Management, dated 6 August 2001, ISO 14001 became the adopted standard for an EMS. In March 2015 the President signed Executive Order 13693, Planning for Federal Sustainability in the Next Decade. Executive Order 13693 revoked previous Executive Orders. However, the Department of the Army issued a memorandum on 06 November 2015 directing Installations to continue with an EMS program.

At Fort Knox, the Garrison and Directorate of Public Works are the implementing organizations for the installation. The implementation will include all activities and organizations at Fort Knox. The goal was set for achievement by December 2009. Fort Knox achieved alignment with ISO 14001 EMS certification by 31 December 2009, recertified on 31 December 2012, and recertified on 31 December 2015.

Why is EMS good? The EMS improves the environmental program by bringing all aspects under centralized management using a single standard. Benefits will be realized in a short time during implementation and operational improvements will be put in place.

The critical information that all employees should know about EMS is included in the next two pages which represents the General Awareness brochure. Review it carefully and give some thought as to the

role you play in the EMS. What objectives and targets do your duties support? How can the performance of your duties best influence the achievement of the objectives and targets?

SUSTAINABILITY

Failure to use sustainability practices will fail to preserve and protect the future of the Fort Knox environment. Fort Knox has declared responsibility for maintaining an Environmental Management System (EMS). All activities and individuals at Fort Knox must be committed to sustaining the future. All activities will be familiar with the Fort Knox Environmental Policy Memo - Environmental Management System, the Fort Knox Policy Memos - Green Procurement, Installation Energy Guidance, and Fort Knox Policy Memo - Recycling Policy.

General Sustainability Practices

- Ensure your personnel know what sustainability means
- Post your sustainability practices
- Post this page where everyone can see the Sustainability Practices we use at Fort Knox

Energy Conservation Practices

Train your personnel on,

- Turning off lights, monitors and printers
- Using and setting digital thermostats
- Utilize flex-fuel vehicles or electric vehicles if allowed
- Purchase energy efficient electronic equipment

Waste Reduction Practices

- Establish recycle locations both inside and outside of your buildings for paper, cardboard and plastic.
- Ensure your personnel know the recycle container locations
- Reuse paper with printed sides as scrap pad paper
- Print on both sides of paper
- Print black and white and use color only when necessary
- Recycle batteries and printer/toner cartridges at QRP

Water Conservation Practices

- Minimize the use of water
- Wash your vehicles at a car wash that recycles the water

Green Procurement Practices

- Purchase equipment with Energy Star setting devices
- Purchase products made from recycled materials
- Purchase from Environmentally Preferred suppliers
- Purchase water efficient products
- Purchase conservation equipment for irrigation and landscaping

APPENDIX F

HAZARDOUS MATERIALS MANAGEMENT & MINIMIZATION EO 13693, 40 CFR, 29 CFR, AR 710-2, DA PAM 710-7

The purpose of this section is to provide guidance and information for the reduction of hazardous materials stored and hazardous waste generated at Fort Knox through the utilization of the Hazardous Material Control Center (HMCC).

OPERATION OF THE HAZARDOUS MATERIAL CONTROL CENTER

Due to the high cost of hazardous waste disposal, increased Environmental Protection Agency (EPA) reporting requirements and the Presidential Executive Order 13693, Federal Government entities are required to reduce the quantity of hazardous materials used. Fort Knox has established a Hazardous Materials Control Center (HMCC) to centralize control of management and processing of hazardous materials and help minimize the amount of hazardous materials used on the installation and reducing the amount of hazardous waste produced. The HMCC is located on Frazier Road in Administration Bldg. 2954 – (502) 624-4275/6688, and Warehouse Bldg. 2953 – (502) 624-5101. Hours of operation are from 0730-1630 Mon-Fri to include Training Holidays.

The key concept of the HMCC is to provide cradle-to-grave management of hazardous materials through screening and monitoring requisitions and issues, reduced inventory quantities at the user level, redistribution of excess materials and reutilization of used serviceable materials. The Logistics Readiness Center (LRC) operates the HMCC by contract.

Free Issue: HMCC does not order Free Issue materials in stock. Excess serviceable materials returned by customers create Free Issue stock. These items will be available for free issue to HMCC customers as they join the program.

Partial Containers: Partial containers of serviceable materials must be turned-in to HMCC. The items must be a common use material, readily identifiable, in a serviceable container, the original label must be legible, and the container must be more than one-fourth full. HMCC will not accept hazardous waste. Contact EMD at 502-624-8379 for hazardous waste guidance.

Requisitions: Requisitions must use the HMCC as the delivery address. Central receiving will direct all shipments of controlled hazardous materials to HMCC for processing. Suppliers of credit card purchases must be notified that **HMCC, Bldg. 2953/2954, located on Frazier Road, Fort Knox, KY 40121-5000** is the shipping address. Local purchases of controlled hazardous materials must be processed through the center on a walk-in basis.

Purchases: Purchases delivered by vendors or their representatives will be delivered only to the HMCC and will include an SDS for each product. Door-to-door deliveries to units or activities is not authorized. HAZMAT and non-HAZMAT items need to be shipped separately. Non-HAZMAT items may be delivered door-to-door to the customer. It is the purchaser's responsibility to inform the vendor of these requirements.

RESPONSIBILITIES

HMCC RESPONSIBILITIES

The HMCC will:

- Function as the central receiving point for hazardous materials used for maintenance and/or industrial purposes entering the installation, except for personal use items in Housing, medical materials, and ammunition.
- Operate the Hazardous Material Control Center (HMCC) and enter all materials that require tracking into the automated tracking system.
- Apply tracking labels to materials that require tracking for EPA reporting.
- Operate the “Free Issue” program for excess serviceable materials.



CUSTOMER RESPONSIBILITIES

Customers will:

- Check the HMCC to see if excess “Free Issue” materials are available before buying new materials.
- Ensure materials that require tracking are processed through the HMCC, prior to use.
- Maintain inventory levels that meet current operational needs. Customers will provide an Authorized Use List (AUL) to the Hazardous Material Control Board (HMCB) for approval. The AUL will be for a 14-day or less supply of on-hand materials. This is to reduce stockpiling and minimize workplace safety hazards, potential spills and excessive hazardous waste. Exceptions to the 14 day limit must be requested through and approved by the HMCB.
- Turn-in excess serviceable materials to the HMCC.
- Select materials that pose the least risk to personnel and the environment.
- Ensure all empty containers are returned to the HMCC.
- Exceptions:
 - Chemlights, fire extinguishers, brake shoes, aerosol pesticides (Raid, Ortho, Permethrin, etc.) and batteries.
 - Only Military lead acid vehicle batteries with the National Stock Numbers (NSN) listed below will be turned into the HMCC:
NSN 6140-01-446-9506, NSN 6140-01-390-1968, and NSN 6140-01-390-1969
 - All other Military and commercial lead acid vehicle batteries may be turned in to the Recycle Center (QRP). All other batteries (Ni-Cad, Lithium, Manganese, etc.) must be

turned into the EMD Hazardous Waste Section. They **DO NOT** go in the trash under any circumstance.

- Contact EMD in regards to aerosol pesticide can disposal.
- All products that have not been used on the Installation before must be approved by the HMCC, **PRIOR** to purchase. Call the HMCC if you are unsure if a product is new to the Installation. You will be required to provide the SDS as part of the approval process.

ORDERING NEW MATERIALS

The HMCC does not order material for the customer. Customers will procure new materials through normal supply channels; i.e., through the Standard Army Retail Supply System (SARSS), through the contracting office, or through the Repairs and Utilities (R&U) program. Materials will be shipped or taken to HMCC for processing through the automated tracking system before use. Purchases delivered by vendors or their representatives will be delivered to the HMCC and include an SDS for each product. It is the purchaser's responsibility to inform the vendor of these requirements. Materials ordered through SARSS will be directed to HMCC by the central receiving point located in Bldg. 2803.

The use of the government IMPAC credit card to purchase hazardous materials is prohibited without appropriate authorization. Customers will process all credit card requisitions of hazardous materials through the HMCC. GPC card purchases will be processed through HMCC prior to use. All GPC card purchases are required to have a Request for Local Purchase of Hazardous Material on file for those purchases. This form is provided by HMCC only after checking to see that the material is not in Free Issue. You must check to see if the items are in Free Issue before purchasing them. Personnel placing the order will direct the vendor to deliver the material to HMCC or the customer will bring the materials to HMCC if they are picked up at the store.

The ship to address is: **Hazardous Materials Control Center, Bldg. 2954.** Make sure you instruct the vendor to also list your name, unit and DODAAC (if applicable) on the delivery form. Without this information, the HMCC will have no way of knowing who the material belongs to.

FREE ISSUE MATERIALS

Excess serviceable materials turned into HMCC will be made available to all customers. Materials can be obtained by having:

- A current DA Form 1687, Delegation of Authority-Receipt for Supplies
- Assumption of command orders (Military), or
- Appointment orders (Gov't Civilians)
- For contractors, the COR must sign the DA Form 1687 as the Responsible Official and provide a copy of their Warrant.

Requisition forms are not required to obtain FREE ISSUE materials. All necessary issue documents will be generated by HMCC personnel utilizing the automated tracking system. Materials will only be issued to personnel listed on the completed DA Form 1687.

EXCESS MATERIALS

Customers are encouraged to turn-in excess, serviceable materials to the HMCC if they are not needed for current operations. These materials will be made available to other customers as "Free Issue"

materials. No paperwork or signature card is required to turn in excess materials but they must meet the following criteria.

- Common use material
- Serviceable/useable material
- In the original container with the original label
- Container must be serviceable; i.e. able to seal, no leaks, not excessively rusty or dented
- ¼ or more of the material remaining
- Not already expired or within 90 days of expiration for materials that cannot have their shelf-life extended.
- HMCC personnel will make all common use and serviceability determinations.

CONTAINER RETURN

All empty containers/consumed materials with the exception of Fire Extinguishers, Brake Shoes, Chem Lights, aerosol pesticides, and batteries (other than vehicle Lead Acid) that were processed through HMCC must be returned to HMCC for proper disposal and chemical usage tracking for EPA reporting purposes. This process is necessary for two reasons.

- It gives “cradle to grave” visibility of hazardous materials stored and used on the installation.
- After it is recorded in the automated database, metal and plastic containers are sent to the Recycle Center for sale as scrap.

ANNUAL INVENTORY REPORTS

Annually, the HMCC will send a Hazardous Material Inventory Report to each customer. The report will show materials recorded in the database currently issued to the customer. Failure to return empty containers or report materials usage and transferring materials between units without reporting the transaction to HMCC will cause the report to be inaccurate. It is important that the report be updated to show current on-hand balances by doing the following:

- Review the report and check it against materials on-hand
- Make corrections on the report to show the current on-hand balance
- Write on the report the barcode number of materials that have a tracking label but are not listed on the report
- Sign, date and return the report to the HMCC by the listed suspense date.

OFFSITE HAZARDOUS MATERIAL INVENTORY PROCEDURE

All units taking hazardous materials away from Fort Knox for training or deployment will conduct an inventory of those materials by serial number and provide a copy to the HMCC, **NO LATER THAN 7 days** prior to removing the materials from Fort Knox. **This does not apply to the local MTAs or Ranges.**

Upon return to Fort Knox, Units will provide an inventory by serial number of all items returning to Fort Knox within 14 days of arrival. Do not include empty containers on this list. The HMCC will take the empty containers but do not need these recorded on the inventory.

Items not on the return list will be considered consumed away from Fort Knox and the Unit's inventory will be adjusted accordingly.

The **Unit Commander** must sign the front sheet of the inventory, signifying that a complete and accurate inventory has been conducted and the status of the items is correct to the best of his/her knowledge.

For additional information please contact HMCC at 502-624-4275/6688/5101 or the EMD Hazardous Material Manager at 502-624-3598.

APPENDIX G

HAZARDOUS/UNIVERSAL WASTE GUIDANCE

401 KAR 31, 32, 33 and 40 CFR 260 - 262

The purpose of this section in the Environmental Handbook is to ensure the proper disposal of Hazardous (HW) /Universal Waste (UW) in compliance with Subtitle C of the Resource Conservation and Recovery Act (RCRA), Kentucky State Regulations and AR 200-1, Environmental Protection and Enhancement.

ROLES AND RESPONSIBILITIES

Each organization (Command, Directorate, Tenant, Army Reserve Component, and Contractor) on the Installation which has activities generating HW shall delegate an Environmental Coordinator, who is responsible for the overall management and compliance with all hazardous waste-generating activities within their organization.

WHAT IS A HAZARDOUS WASTE?

A RCRA hazardous waste is almost any hazardous material that can no longer be used for its intended purposes and meets any of the following criteria:

- **Ignitability**--flash point less than 140 F (40 CFR 261.21).
- **Corrosivity**--pH less than or equal to 2, or greater than or equal to 12.5 (40 CFR 261.22).
- **Reactivity**--normally unstable, reacts violently with water, generates toxic gas/fumes when mixed with water (40 CFR 261.23).
- **Toxicity**--having concentrations equal to or greater than the levels listed in (40 CFR 261.24, Table 1).
- Listed waste—(any waste, by name) appearing on the list in (40 CFR 261.30, Subpart D and 261.33).
- Unknown waste--must be tested to determine if it meets the criteria of a RCRA hazardous waste, contact EMD.
- Used products contaminated with any listed hazardous waste.

Adequate information must be provided for proper identification of waste and any contaminants being turned in. This information is required to preclude more costly identification measures and to insure prompt and environmentally acceptable disposal of Hazardous Waste (HW). Laboratory analysis is required for all waste that does not have adequate user knowledge or an acceptable SDS/MSDS.

TURN-IN OF HAZARDOUS/UNIVERSAL WASTE

The following procedure will be followed by the generating activity for all hazardous waste turn-in.

Generator or Generating Activity Responsibilities:

- Call EMD hazardous/universal waste POC at 502-624-8379 or 502-624-6598.

- Take excess or unwanted hazardous materials to HMCC for possible reuse.
- Supply information to EMD on waste. Turn paperwork into EMD hazardous waste personnel by appointment.
- Assist in packaging waste per EMD instructions.

Obtain the SDSs corresponding to the hazardous materials in the hazardous/universal waste. The SDS must match the exact stock number, name of item and manufacturer of the hazardous/universal materials in the hazardous/universal waste identified for turned in. If a problem occurs in obtaining a SDS, contact the Environmental Management Division for assistance.

Regulated Waste - To turn in regulated waste, the generator must fill out the Regulated Waste Information form found in Appendix D. The information found on the item or the container label must be included on the form. **DO NOT COPY** from the SDS. If there is no information on the item or container label, write “no information available” on the form. Use one form for each different item to be turned in. This form can be faxed to EMD at 502-624-3000 once completed.

Batteries - To turn in batteries, the generator must fill out the Batteries Information Worksheet found in Appendix D. The information found on the item must be included on the form. Use one form for each different type item to be turned in.

The following information on the Batteries Information Worksheet is required by EMD when turning in paperwork for hazardous/universal waste to be turned-in to DRMS. Your paperwork cannot be processed without this critical information.

- ✓ *UNIT/ORGANIZATION*
- ✓ *POC*
- ✓ *ALTERNATE POC*
- ✓ *DOCUMENT NUMBER*
- ✓ *BUILDING NUMBER*
- ✓ *PHONE NUMBER*
- ✓ *INFORMATION TAKEN FROM THE CONTAINER OR ITEM*

Call the Environmental Management Division, 502-624-8379/6598, to make an appointment for review and turn-in of the appropriate forms and proper Safety Data Sheet (SDS). Instructions will be given to the waste generator at this time concerning proper packaging, labeling procedures and turn-in to DRMS.

PACKAGING AND LABELING OF HAZARDOUS WASTE

The proper packaging and labeling of all hazardous/universal waste is handled by the EMD Hazardous Waste Office.

ALL Battery Terminals/Posts will be taped to prevent arcing before turn-in.

BATTERIES

Different types of batteries **cannot be mixed** (e.g. Magnesium Batteries, Mercury Batteries, Lithium Batteries, or Nickel-Cadmium Batteries stored together).

Contact EMD to confirm disposal guidance for each of the following battery types.

Where possible, all batteries should be completely discharged before packing and listed on the Batteries Information Worksheet found in Appendix D.

TYPES OF WASTES TURNED IN THROUGH EMD

Keep all waste in the original containers.

Common Types of RCRA Hazardous Waste:

- Fuel Line Anti-Freeze (Methanol)
- Oil-based and Epoxy Paints
- Paint Thinners
- Alcohols
- Adhesives
- Nuclear Biological Chemical (NBC) Kits - Expired.
- Calcium Hypochlorite
- NBC Filters
- Field Sanitation Kits - Contact EMD
- Off Spec Chemicals
- Weapon Bore Cleaning Patches
- Pesticides and Pesticide Containers
- CARC Paint

Common Types of Non-Hazardous Waste:

Contact EMD for disposal of the following common Non-Hazardous Wastes

- Greases
- Latex Paint, Dried Paint
- Free flowing liquids that cannot be disposed of in regular trash
- Adhesives
- Alkaline Batteries (AA, AAA, C, D, 6v and 9v)

Common Types of Universal Waste:

Contact EMD for disposal of the following common Universal Wastes

- Fluorescent lamps – separate by size (length or type)
- Mercury vapor lamps & mercury switches
- Lithium batteries
- Ni-Cad batteries

The items listed below must be turned in to the agency listed for recycling:

- Used oil and antifreeze QRP Building 2962
- Used Diesel/Mogas/JP8/F-24 QRP Building 2962 or call 502-624-8379
- Serviceable Material HMCC Building 2954

Collection and Disposal Guidance

Hazardous and Universal waste **WILL NOT** be mixed.

Collect as follows:

Solvents

Units purchasing parts washers and solvent are responsible for testing and disposal costs.

Paints

Contact EMD at 502-624-8379/6598. Keep in the original container with the label intact. Provide EMD a completed copy of EMD Regulated Waste Information Worksheet found in Appendix D along with the proper SDS/MSDS(s).

Paint Thinners

Contact EMD at 502-624-8379/6598. Provide EMD a completed copy of EMD Regulated Waste Information Worksheet found in Appendix D along with the proper SDS/MSDS(s).

Personal NBC Equipment

Filters, suits, and gloves will be disposed of in accordance with DRMS DEMIL Bulletin FY-07-008. Contact EMD 502-624-8379/6598 or the DRMS at 502-626-3769 for disposal procedures concerning NBC Items.

Alcohols

Contact EMD at 502-624-8379/6598. Keep in the original container. Provide EMD a completed copy of EMD Regulated Waste Information Worksheet found in Appendix D along with the proper SDS/MSDS(s).

SATELLITE ACCUMULATION POINT (SAP)
UNIVERSAL WASTE COLLECTION AREAS (UWCA) REQUIREMENTS

Definition: Satellite Accumulation Points/Universal Waste Collection Areas - locations where hazardous waste or universal wastes are accumulated in sufficient quantities as to make it cost effective prior to dispose of through DRMS Disposition Services Knox.

There are 2 types of collection sites.

- A **hazardous waste SAP** is used for the accumulation of hazardous wastes such as paints, filters and/or other waste materials that meet the definition of a hazardous waste. These items are turned into DRSM Disposition Services Knox for disposal.
- A **universal waste UWCA** is used for accumulation of universal waste materials such as lithium or Ni-cad batteries and some items containing mercury, that are turned into DRMS as a recyclable material.

The following pertains to all current and any future hazardous waste or universal waste. SAPs and UWCAs are designated by the EMD. EOs are required to perform monthly inspections of these sites using EMD forms, Unit Satellite Accumulation Point Inspection Checklist Hazardous Waste (HW) and Unit Environmental Program Inspection Checklist Universal Waste (UW). A representative from the EMD will conduct quarterly inspections of the SAP and UWCA, to include inspecting the SAP/UWCA book. Each site EO will maintain a SAP/UWCA inspection book that will contain the following information.

- **Appointment orders for Primary and Alternate EO's**
- **EO training course completion certificate**
- **Blank Waste Information Worksheets**
- **SDS/MSDS or LAB Result for each item stored at the SAP/UWCA site**
- **Current Environmental Handbook**

Inspection sheets will be kept for the entire month in the SAP/UWCA book then placed in a folder as part of a record keeping system to be maintained for a period of 3 years. Turned-in documents of hazardous and universal waste disposed of through DRMS Disposition Services Knox will also be maintained for a period of 3 years. These documents must be maintained on site and accessible for review.

Maintaining SAP/UWCA Sites

- The generator/operator is responsible for maintaining and inspecting the SAP/UWCA site.
- Due to the complexity of the various materials used on the installation, EMD guidance and approval should be sought prior to establishing a location of a SAP/UWCA site and the waste materials stored at the site.
- Containers will always be stored in such a manner that the labels will be facing forward and are able to be seen when an individual enters the area.
- Lids/tops and caps will be kept closed at all times unless waste is being added to the container.
- SAP/UWCA locations should be free of litter and not have materials stored on top of containers.

ENVIRONMENTAL HANDBOOK Issue 016 Ver. 01

- The locations of the SAP/UWCA site should be at or near the point of waste generation,

The SAP/UWCA site must be under the control of the SAP/UWCA site manager to avoid mixing and contamination of waste streams.

SAP/UWCA sites that contain multiple waste streams must have ample containment to avoid the cross contamination of waste streams in the event of spills.

Universal Waste (UCA) sites must be marked with a “date in use” of the waste placed at the UWCA site. This is the date that you first placed the Universal Waste, “used batteries,” into the UWCA site.

The start date cannot exceed more than 1 year at a Universal Waste UWCA site, regardless of how much waste is accumulated there.

EMD personnel will work with the SAP site managers to establish the limits on the amount of waste accumulated at each site in order to not exceed the 55-gallon rule for hazardous waste SAPs.

EMD forms, Regulated Waste Information Worksheet found in Appendix D will be filled out by the SAP/UWCA manager and turned in to EMD or faxed to 502-624-3000 on each hazardous waste or universal waste turned in.

Refer any questions concerning SAP/UWCA sites or other related hazardous/universal waste issues to the Environmental Management Division at 502-624-8379/6598.

Inspection forms and all hazardous waste information sheets may be faxed to EMD at 502-624-3000 or scanned and sent electronically to the Hazardous Waste Program Manager.

NAVOSHENVTRACEN COMPATIBILITY CHART

HMUG GROUP	HCC see note 2	GROUP NAME	EXAMPLES	INCOMPATIBLE MATERIALS	EXAMPLES	REACTION IF MIXED
1	C1, C2, C4, C5	ACIDS 	Battery Acid Paint Removers De-Rust Spray	FLAMMABLES/ COMBUSTIBLES ALKALIS/BASES/CAUSTICS OXIDIZERS (HMUG Groups 2, 3, 4, 6, 7, 9, 10, 11, 12, 13, 14, 15, 17, 18, 19, 20, 22)	Degreasers, Carbon Removers, Anti-Fogging Compounds	HEAT Gas Generation VIOLENT REACTION 
2	F1 to F7, P1, T6, V3, V4	ADHESIVES	Epoxies Isocyanates Diethylenetriamine	ACIDS ALKALIS/BASES/CAUSTICS OXIDIZERS (HMUG Groups 1, 3, 18)		HEAT FIRE HAZARD 
3	B1, B2	ALKALIES BASES/ CAUSTICS 	Ammonia Sodium Hydroxide Cleaners	ACIDS/OXIDIZERS FLAMMABLES/COMBUSTIBLES (HMUG Groups 1, 2, 6, 8, 9, 10, 11, 14, 17, 18, 19, 20, 22)	Battery acid, Paint Removers, De-Rust Sprays, Paints, Solvents	HEAT Gas Generation VIOLENT REACTION 
4	C1-C4, B1-B3, F2 to F7, T4, T6, V2-V4	CLEANING COMPOUNDS	Degreasers Carbon Removers Antifogging Compounds	DETERGENTS/SOAPS OXIDIZERS (HMUG Groups 1, 7, 18)	Calcium Hypochlorite, Sodium Nitrite, Hydrogen Peroxide	HEAT FIRE HAZARD 
5	G1 to G9	COMPRESSED GASES 	Acetylene, Propane, Nitrogen, Argon, Helium, Oxygen	HEAT SOURCES Consult paragraph C23 for specific handling and storage guidance (HMUG Groups 8, 9, 10, 11, 12, 15, 18, 19)		FIRE HAZARD EXPLOSION HAZARD 
6	F2 to F5, T6, V2, V3, V4	CORROSION PREVENTIVE COMPOUNDS	Corrosion Inhibitors Chemical Conversion Compounds	ACIDS/BASES OXIDIZERS IGNITION SOURCES (HMUG Group 1, 3, 18, 20)		FIRE HAZARD 
7	B3	DETERGENTS/ SOAPS	Trisodium Phosphate Scouring Powders Disinfectants	ACID-CONTAINING COMPOUNDS (HMUG Groups 1, 4, 18)	Battery Acid, Paint Removers, De-Rust Sprays	VIOLENT REACTION HEAT 
8	F8, V6, V7	GREASES 	Lithium Grease Silicone Molybdenum	OXIDIZERS ALKALIS/BASES/CAUSTICS (HMUG Groups 3, 5, 18)		FIRE HAZARD HEAT 
9	T6, V4, V6, V7	HYDRAULIC FLUIDS	Petroleum-Based Synthetic Fire-Resistant	CORROSIVES, OXIDIZERS (HMUG Groups 1, 3, 5, 18)		VIOLENT REACTION 
10	F2 to F4, T4, T6, V2-V6	INSPECTION PENETRANTS	Petroleum-Based Dyes	CORROSIVES, OXIDIZERS (HMUG Groups 1, 3, 5, 18)	Battery Acid Caustic Soda Chlorine laundry bleach Calcium Hypochlorite Hydrogen Peroxide OBA Canisters Paint Removers	EXPLOSION HAZARD 
11	F4, T6, V2, V3, V4, V6	LUBRICANTS/ OILS	General Purpose, Gear, Turbine, Weapons			EXPLOSION HAZARD 
12	F2 to F6, P1, T3, T4, T6, V1-V4	PAINT MATERIALS 	Primers, Enamels, Urethanes, Lacquers, Varnishes, Non-Skid, Thinners	ACIDS, OXIDIZERS (HMUG Groups 1, 5, 18)		HEAT FIRE HAZARD 
13	C1-C4, B1-B3, D1	PHOTO CHEMICALS	Developers, Stopbath, Toners, Bleaches, Replenishers	ACIDS HEAVY METALS (HMUG Groups 1, 18, 20)		HEAT FIRE HAZARD 
14	F4	POLISH/WAX COMPOUNDS	Buffing Compounds Metal Polishes General Purpose Waxes	CORROSIVES OXIDIZERS (HMUG Groups 1, 3, 18)		HEAT, FIRE HAZARD VIOLENT REACTION 
15	F2 to F6, T3, T4, T6, V1-V4	SOLVENTS	Methyl Ethyl Ketone (MEK) Toluene, Xylene Acetone	CORROSIVES OXIDIZERS BATTERIES (HMUG Groups 1, 5, 18, 21, 22)	Battery Acid Calcium Hypochlorite Sodium Nitrite Sodium Hydroxide	HEAT FIRE HAZARD 
16	T6, T7, Z1	THERMAL INSULATION	Asbestos Fiberglass Glass Wool	MATERIAL IS NOT REACTIVE KEEP DRY		NO REACTION
17	C1-C4, B1-B3, D1	WATER TEST/ TREATMENT CHEMICALS	Nitric Acid Mercuric Nitrate Caustic Soda	CORROSIVES OXIDIZERS HEAVY METALS (HMUG Groups 1, 3, 18, 20, 21)		HEAT VIOLENT REACTION 
18	D1 to D4	OXIDIZERS 	Calcium Hypochlorite Laundry Bleach OBA Canisters	PETROLEUM BASED MATERIALS FUELS, SOLVENTS, CORROSIVES, HEAT (HMUG Groups 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 22)		FIRE HAZARD VIOLENT REACTION EXPLOSION HAZARD TOXIC GAS GENERATION 
19	F1 to F4, V4, V5, V6	FUELS	JP4, JP5 Gasoline Diesel Fuel	CORROSIVES OXIDIZERS (HMUG Groups 1, 3, 5, 18)	Battery Acid Calcium Hypochlorite Sodium Nitrite Sodium Hydroxide	FIRE HAZARD TOXIC GAS GENERATION
20	T6, V7, Z2	HEAVY METALS	Mercury Lead Beryllium	CORROSIVES OXIDIZERS WATER TREATMENT/PHOTO CHEMICALS (HMUG Groups 1, 3, 6, 13, 17, 18, 21)		VIOLENT REACTION GENERATION OF TOXIC AND FLAMMABLE GAS
21	Z4 to Z7	BATTERIES	Lead-Acid Dry-Cell Alkaline	SOLVENTS HEAVY METALS OXIDIZERS (HMUG Groups 15, 17, 18, 20)	Xylene Toluene Alcohol	HEAT VIOLENT REACTION TOXIC GAS GENERATION 
22	T2 to T6	PESTICIDES	Insecticides, Fungicides Rodenticides Fumigants	CORROSIVES OXIDIZERS (HMUG Groups 1, 3, 15, 18)		TOXIC GAS GENERATION

1. This chart is to be used as a **GUIDE ONLY!**
2. Compare the desired HMUG Group/HCC in the left column with the Incompatible Material(s) of that Group in the center column on the same row. Mixing of the HMUG Group/HCC with the Incompatible Material(s) may result in the reaction(s) listed in the right column.
3. Not all applicable HCCs are listed; only the most frequently encountered HCCs (except N1) are listed.

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APPENDIX H

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

AR 200-1

The purpose of this section is to provide guidance for assessing the environmental effects of Army actions at Fort Knox and developing the necessary documentation in accordance with 32 CFR Part 651, and the National Environmental Policy Act (NEPA) of 1969 as amended. NEPA requires federal agencies to evaluate the environmental impacts of their actions and integrate such evaluations into their decision-making processes. During the preparation of the NEPA document, agencies are required to integrate public participation, responding to comments from the public, interested or affected parties and government agencies on the effects of proposed actions that have a significant impact on the environment.

APPLICABILITY

NEPA applies to all units, organizations and staff agencies assigned to Fort Knox as well as units visiting the installation for annual or special training events.

ENVIRONMENTAL REVIEW CATEGORIES

The Army has five broad categories into which a proposed action may fall for environmental review. Those categories are: Exemption by Law, Emergencies, Record of Environmental Consideration/Categorical Exclusions; Environmental Assessments (EA) and Environmental Impact Statements (EIS). Fort Knox commonly uses: Categorical Exclusions (CX), Environmental Assessments and the Environmental Impact Statement. Under the provisions of NEPA, environmental assessments and environmental impact statements require public involvement and review/comment periods.

TYPES OF ACTIONS/PROJECTS REQUIRING EVALUATION

Actions which normally require an Environmental Impact Statement are as follows:

- Significant expansion of a military facility or installation,
- Construction of facilities that have significant effect on wetlands, coastal zones, or other areas of critical environmental concern,
- Land acquisition, leasing or other actions that lead to significant changes in land use,
- Realignment or stationing of a brigade or larger table of organization equipment,
- Training exercises conducted outside the boundaries of an existing military reservation, and
- Major changes in the mission or facilities either affecting sensitive resources or causing significant environmental impact.

The following actions normally require an Environmental Assessment (EA):

- Special field training exercises or test activities,

- Construction that exceeds five contiguous acres of previously undisturbed land,
- Changes to established installation land use that generate impacts to the environment,
- Alteration projects affecting historically significant structures,
- Actions that could cause significant increase in soil erosion or affect prime farmland, wetlands, floodplains, etc.,
- Actions proposed during the life cycle of a weapon system,
- Actions that take place in, or adversely affect, important wildlife habitats, and
- Activities that affects a federally listed threatened or endangered plant or animal species.

Categorical Exclusions (CX) are categories of actions with no individual or cumulative effect on the human or natural environment and for which neither an EA nor an (EIS) is required. Screening criteria determines whether an action falls into the listed CXs. The CXs are listed in AR 200-2, Appendix B to Part 651 – Categorical Exclusions.

Samples of actions covered under the CXs are:

- Administration/operation activities,
- Construction and demolition, cultural and natural resource management activities,
- Procurement and contract activities, and
- Real estate activities.

PROCEDURES

This paragraph describes the roles and responsibilities of the installation players, Army reviewers and commanders as described in AR 200-2.

Proponent/Decision Maker: The proponent is the person, unit, organization or staff agency responsible for planning and implementing the proposed action to carry out their prescribed Army mission. The proponent is responsible for:

- Consulting with the DPW EMD NEPA Coordinator as soon as an action is proposed to alert the environmental staff of the requirement;
- Developing/funding the NEPA document and funding any studies (i.e. air quality, water quality, socio-economic, noise, etc.) that may be required. Development of the NEPA document should begin as soon as the potential action is identified;
- Clearly defining the proposed action and all reasonable alternatives (including the “no action” alternative) and providing the information to the NEPA Coordinator;
- Preparation of the NEPA document as early as possible in the planning process and in coordination with the DPW NEPA Team. The appropriate command levels must sign the NEPA document and all required public review periods must be completed before the action can begin;
- Implementing the decision and mitigation measures;
- Mitigation (reduction) must be listed as line items in the proponent’s budget;
- NEPA documentation will be coordinated with Range Control, Integrated Training Area Management (ITAM) when any training lands are involved.

DPW NEPA Team: The NEPA team consists of the Installation Environmental Coordinator, Project Proponent, Attorney Advisor, NEPA Coordinator, Interdisciplinary Environmental Management Division personnel from each of the following disciplines: air quality, noise, hazardous materials, storm water management, erosion control, forestry, fish and wildlife management, natural and cultural resource, environmental engineer and others as needed (Safety Office, Public Affairs, etc.).

- The DPW EMD NEPA Coordinator, 502-624-5174, will serve as the point of contact for the coordination of all NEPA documents.
- The NEPA Coordinator and NEPA Team will work with the proponent and the Office of Staff Judge Advocate to determine the appropriate level of documentation (Record of Decision/Categorical Exclusion, Environmental Assessment or Environmental Impact Statement) that is legally sufficient.
- The NEPA Team will assist the proponent with the development of the appropriate NEPA document by reviewing the proposed action and providing recommendations.
- The NEPA Coordinator will staff training related actions through appropriate staff agencies.
- Subject matter experts (SMEs) on the NEPA Team will coordinate with federal, state and local agencies and the general public throughout the development of the document to ensure compliance with environmental laws.

The NEPA Coordinator will staff the final document through the Office of the Staff Judge Advocate, Environmental Coordinator and the command channels and staff elements as appropriate for the level of the document.

APPENDIX I

NATURAL RESOURCES

AR 200-1

The purpose of this section is to provide information on the conservation and management of the installation's natural resources (land, forest, wildlife, water) through the coordinated efforts of the DPW Environmental Management Division, Directorate of Plans, Training, Mobilization and Security (DPTMS), and the training community.

PROTECTION OF STREAMS AND WATERWAYS

AR 200-1 and the Clean Water Act mandate the installation to control non-point source pollution of streams.



Soil erosion contributes to the buildup of sediment in drainage channels, clogs drainage ways and results in poor water quality. These are violations of the Clean Water Act and Kentucky Administrative Regulation (KAR) 401, Water Quality, and are punishable by fines up to \$25,000 per day for negligence, or by imprisonment of not more than 1 year, or both. Fines for knowingly violating the laws are punishable by fines up to \$50,000 per day, or by imprisonment of not more than 3 years or both.

Crossing streambeds and traveling along the stream bank with heavy vehicles contribute to the loss of the installation's training lands by soil erosion. Heavy vehicle traffic destroys vegetation and loosens the bank materials. Gully and stream bank erosion accelerates when runoff water funnels down the rutted banks.

To reduce the sedimentation of Otter Creek, three permanent concrete water crossings have been constructed in Training Areas 9 and 10. These structures are the only authorized crossings on Otter Creek. A vegetated buffer of at least 70 feet must be maintained along all creeks and natural waterways to reduce sedimentation entering the surface waters.

To sustain the training lands and protect the installation's water resources, the following Best Management Practices (BMPs) must be followed:

- Cross-streams only at designated crossing site,
- Washing vehicles in a stream or driving vehicles along a stream bed is prohibited,
- Do not use dry streambeds and natural waterways as travel routes, and
- Field servicing of vehicles should be conducted only in approved locations which are away from lakes, streams or rivers.

PRESCRIBED BURNS

Prescribed burning is performed by trained natural resource professionals as a tool to manipulate existing stands of trees and growth of woody vegetation to improve both forestry and wildlife habitats. Also by reducing the accumulation of dead vegetation, prescribed burning is used to reduce the high volume of fuels which contribute to uncontrollable wildfires.

Trained personnel in a controlled environment conduct prescribed burns. Temperature, weather, wind speed and direction, humidity and fuel moisture are used to determine the safety of burning a particular area at a given time. Burns are conducted at different times of the year depending on the desired outcome. Fire breaks are constructed around each burn unit to reduce the potential of fire jumping the fire line.

FIREBREAKS

Firebreaks and fire access lanes are located on the installation to provide access for control of wildfires and to act as a barrier to keep installation wildfires from escaping and burning private lands. Firebreaks are clearly marked with signs and are OFF-LIMITS.

FIREWOOD

A “cut your own” firewood lot is located off Frazier Rd. Personnel desiring to cut firewood for personal use must obtain a firewood permit that can be purchased at the Hunt Control Office for \$10 per day.

Military units requesting firewood for fire barrels should contact the Forestry Office at Bldg. 9297. The Installation Forester will determine whether to allow cutting of downed trees only near the bivouac area, or issue a free permit to get wood from the “cut your own” lot. Soldiers using chainsaws to cut firewood for unit use must be trained on safe chainsaw operation. Training can be scheduled with the Forestry Office.

All wood, standing or down, is considered property of the US government and removal without a permit from the Forestry Office is not authorized. For more information on fire wood visit this website for Fort Knox Pamphlet 420-2.

<http://www.knox.army.mil/Garrison/dhr/asd/docs/pams/P420-2.pdf>

FORESTRY

The Natural Resources Branch is responsible for overseeing the vast and diversified forest ecosystem and ensuring the forest health is monitored and maintained for long-term training area enhancement. This includes the forest within the cantonment area. Military units training within Fort Knox forests are required to minimize their impact on the forest so other units benefit from its use in the future. Nails, spikes, screws or other devices are be driven into trees.

Remove all wire you may have wrapped around trees prior to vacating training areas. The cutting of standing trees, live or dead, is not authorized.



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Units requiring fuel wood for fire barrels should refer to the preceding Section on “Firewood” for contact information on obtaining fuel wood. No open burning is permitted outside of fire barrels.

All trees, plants, shrubs, nuts, etc., located within the confines of the installation boundary are the property of the US government and no digging or removal is authorized without a permit. This includes residential units. Units or residences having trees or shrubs in need of work should contact the DPW Work Order Section. See Appendix P for work order instructions.

No tree houses are allowed to be built in any trees. No harvesting of wild ginseng or yellow root is permitted.

WILDLIFE FOOD PLOTS

Throughout the installation 1/4- to 5-acre plots have been established to provide food for wildlife. These areas are generally plowed, fertilized, and planted annually. Areas may be planted in corn, clover, soybeans, millet, sunflowers or other vegetation to provide food for wildlife. Species that benefit from food plots include rabbit, deer, quail, turkeys and non-game species. Trainers should make every effort to avoid these food plots.

NATIVE WARM SEASON GRASSES

Approximately 15-30 acres of native warm season grasses are planted each year by the Natural Resources Branch. Establishment of warm season grasses is concentrated in what are now fescue fields. This is accomplished by eradicating the fescue first and then seeding the area with a mixture of native grasses and wild flowers. This new field of warm season grasses and wild flowers will provide quality escape, bedding, and nesting cover for many species of wildlife.

ENDANGERED SPECIES MANAGEMENT

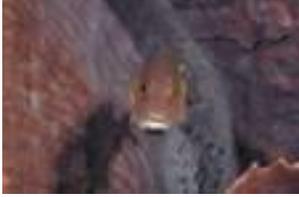


The installation has two federally-listed endangered species (gray bat and Indiana bat), one federally-threatened species (northern long-eared bat), and two species of management concern (Henslow’s sparrow and cerulean warbler). To comply with the Endangered Species Act, the installation must protect these species and their habitats. Additionally, AR 200-1 requires installations to ensure that actions are not taken to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species.

Fort Knox has an Endangered Species Management Plan (ESMP) that was developed by the U.S. Fish and Wildlife Service to protect and manage these species. The ESMP requires the installation to establish vegetated buffers approximately 70-feet wide around sinkholes and waterways. Permanent concrete crossings have been constructed at three locations along Otter Creek.

In order to comply with the Endangered Species Management Plans no cutting of standing trees (dead or alive) is authorized on Fort Knox without approval from Environmental Management Division.

LAKE MANAGEMENT AND FISHING PROGRAM



There are seven lakes on the installation that are managed by the Natural Resources Branch. Personnel desiring to fish in the installation's lakes must obtain a Fort Knox Fishing Permit prior to fishing. Additional information is provided in Fort Knox Fishing Guidelines, by calling Hunt Control at 502-624-2712 or 502-624-7311, or on this Fort Knox website.

<http://www.knox.army.mil/Garrison/dpw/emd/huntctrl/Default.aspx>

Throughout the summer trout are released along Otter Creek. Fishing for trout in Otter Creek requires a state fishing license, trout stamp, and Fort Knox permit. A delayed harvest trout program has also been placed on Otter Creek. All trout caught in the delayed harvest area will be immediately released back into the water during the time period of 1 October – 31 March. Anglers shall use artificial lures only during this period. Additional information pertaining to the fishing or the trout program can be obtained at the Hunt Control Office, building 9297.



HUNTING PROGRAM



The Hunt Control Office, Natural Resources Branch, conducts the installation's hunting program. Hunt Control coordinates with DPTMS to open areas for the purpose of hunting deer and turkey as well as dove, rabbit, quail and other small game.



Hunt Control is located in Bldg.9297. Additional information concerning the hunting program is found in Fort Knox Hunting Guidelines, by calling Hunt Control at 502-624-2712 or 502- 624-7311, or on this Fort Knox website.

<http://www.knox.army.mil/Garrison/dpw/emd/huntctrl/Default.aspx>



PESTICIDE & HERBICIDE MANAGEMENT

The ACSS Pest Management contractor is responsible for the application and management of insect and rodent pests that occur on Fort Knox. Integrated Pest Management is highly implemented on Fort Knox assuring that the least amount of pesticide is used to control the pest problem with the least effect to the environment.

The installation has a policy on the control of pest animals. Pest Management services can be obtained by submitting a Work Order. See Appendix P for work order instructions.

The Installation Pest Management Coordinator in the Natural Resources Branch is responsible for ensuring that the installation is meeting its goals of reduced pesticide use. Pesticides include insecticides, herbicides, fungicides, etc. The Installation Pest Management Coordinator also has the oversight of herbicide application and monitoring for the installation.

APPENDIX J

NOISE

AR200-1 and TM 5-803-2

Noise associated with military readiness (aircraft, small and large caliber weapons, rocket, launchers, bombs, mortars, etc.) has long been an issue at installations, and more recently low level flying routes, and test and training ranges. Urban expansion, the growing property rights movement, and the continued loss of critical habitat and decline in numbers of Threatened and Endangered Species (TES) outside installation/range boundaries have contributed to the rise of anti-military noise sentiment, organizations and legislative proposals.

Weapons system noise is one of the most obvious consequences of military activities, but the impacts cannot be easily separated for the issue of urbanization and endangered species. If there is no noise, the urban encroachment concerns decline dramatically and there is one less threat to endangered species.

The reverse also applies, with no growing urbanization, or resident endangered species, the uproar associated with noise declines dramatically. The pivotal issue of noise is the impact, or perceived impact of noise on people, animals (both wild and domestic), structures, and land use. The degrees to which any restrictions are imposed, or self-generated is directly related to the degree to which there are people, wildlife, and noise-sensitive land uses near military lands and low level aircraft training routes.

The Services have recognized that mission readiness is highly dependent on our ability to “train as we fight”, our ability to be a good neighbor, and our ability to work with communities to address their noise concerns. The Army began a program in the 80s called the Installation Compatible Use Zone (ICUZ) program. Central to this program is noise modeling that creates noise contours against which the land use compatibility designations are overlaid.

The Environmental Management Division regularly updates the noise contours generated by the training and military activities on the installation. These contours are shared with all surrounding community planning entities, to assist in decision making for planning and zoning and continual land use compatibilities. EMD meets with community planners to address all new planning and zoning proposals to assist in preserving compatible land use for both the private sector and the Army.

For more information on the noise program contact the Environmental Management Division at 502-624-8263.

APPENDIX K

POLLUTION PREVENTION (P2) & GREEN PROCUREMENT PROGRAM (GPP) Executive Order 13693 and Pollution Prevention Act of 1990

The purpose of the Pollution Prevention Section is to provide information which is necessary to accomplish the goal of reducing the harmful effects of chemicals, solvents and other materials on the environment. The enactment of the Pollution Prevention Act in 1990 along with Executive Orders 12856, Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements (3 August 1993) and 12873, Federal Acquisition Recycling and Waste Prevention (20 October 1993) issued in 1993 set the foundation for compliance in pollution prevention for all federal facilities and agencies. Since then, Executive Order 13693 has been issued which strengthens the previous executive orders.

WHAT IS POLLUTION PREVENTION?

As defined under the Pollution Prevention Act, pollution prevention means "source reduction" and other practices that reduce or eliminate the creation of pollutants through:

- Increased efficiency in the use of raw materials, energy, water, or other resources.
- Protection of natural resources by conservation that includes recycling, reclaiming and treatment.
- Reducing, Reusing and Recycling.

WHY IS POLLUTION PREVENTION IMPORTANT?

- Saves dollars, results in cost reductions, improves productivity.
- It is a compliance issue, not just discretionary! It applies to all of us.
- Minimizes legal liabilities and health risks.
- Establishes the Army as a good steward of the environment - demonstrates Army leadership.
- It is the "right thing to do" and the public expects it.
- Allows Army to perform its "METL" (Mission Essential Task List).

POLLUTION PREVENTION GOALS

The main goals of pollution prevention which can be accomplished at the unit and above level are listed below.

- Reduce/eliminate/substitute hazardous materials usage and hazardous waste producing operations and processes.
- Repair/reuse materials and products.
- Executive Orders (EO) 13693, and Green Procurement requires all agencies to integrate the four existing disparate purchasing requirements into an integrated federal purchasing effort that applies to all types of acquisitions of goods and services.
- Federal purchasing of energy efficient, recycled content, bio-based, and environmentally preferable products will increase as a result. Also, the EO communicates the requirement that agencies purchase office paper containing 30 percent post-consumer fiber.

- Recycle
- Instill pollution prevention in accordance with the Fort Knox Environmental Management System program.

EXAMPLES OF POLLUTION PREVENTION BY REDUCTION/REUSE

- Reduce paper usage: maximize the use of e-mail; copy on both sides of paper; and use routing slips.
- Purchase materials/products in sizes that reflect the usage. Activities are to store no more than a 14 day material requirement. Refer to the HMCC guidelines.
- Purchase items that can be used more than once such as ceramic coffee cups and glasses instead of Styrofoam containers.
- Reuse material, such as absorbents when possible.
- Repair equipment instead of discarding.
- Utilize the HMCC to turn in excess products for to use.
- Comply with Appendix L - "Recycle".



others

GREEN PROCUREMENT PROGRAM

Fort Knox has a Green Procurement Policy and Program Manual – Memo. These documents are available on the Fort Knox Internet.

Green Procurement has a sustainability payoff in:

- sustaining the future,
- protecting the environment, and
- reducing pollution.

Green Procurement includes increasing purchases of green products and services consistent with the demands of mission, efficiency, and cost-effectiveness, with continual improvement toward federally established procurement goals.

The Green Procurement program requires a reduction in solid waste, consumption of energy and natural resources, and expanded markets for green products and services.

Green products must be used when available. If a green product is inadequate or unavailable then a letter of justification, stating the reason for the deviation, must be maintained on file and provided when requested. When you buy green products you must keep purchase records in your files.

Green Procurement of Sustainable Acquisition involves the Federal Government's requirements to purchase products with environmental and energy saving attributes. Green products are made from recycled materials and approved by EPA and have the following attributes:

- creates markets for recycled materials & agricultural products,
- conserves resources & saves energy,
- saves landfill space & reduces pollution, and
- supports sustainability.

These are the Green Procurement Categories,

- Energy efficient products and bio-based products,
- Environmentally preferable products (EPP),
- Water efficiency products and non-ozone depleting substances,
- Recycled content product which means replacing virgin materials with recycled materials, including post-consumer products,
- Alternative fuel vehicles & alternative fuels, and
- Low or non-toxic and/or non-hazardous chemicals.

Examples of designated recycled products:

- Structural fiberboard,
- Plastic lumber, landscaping timbers and post
- Printing and writing papers
- Playground equipment
- Retread tires, and
- Sorbents.

Examples of "Green" products:

- Paper and paper products
- Non-paper office products,
- Plastic lumber & carpet,
- Recycled latex paint
- Pallets,
- Vehicular products,
- Landscaping materials, and
- Park & recreation products.

Environmentally Preferable Products (EPP)

- EPP Products and Services have a lesser or reduced effect on human health and the environment when compared with competing products or services.
- Examples of EPP
 - ✓ Cleaning products that are non-toxic, non-volatile, and biodegradable,
 - ✓ Paint with no or low volatile organic compounds, and
 - ✓ 100 percent post-consumer paper that is not chemically de-inked and is process chlorine free.

Water Efficient Products

Federal agencies are required to purchase water efficient products. EPA manages the Water Sense Program which identifies and promotes efficient products that meet criteria for water efficiency and performance.

- Examples of Water Efficient Products
 - ✓ High efficiency toilets & urinals,
 - ✓ Sink faucets & showerheads, and
 - ✓ Landscape irrigation systems.

Non-Ozone Depleting Substances

EPA created the Significant New Alternative Policy (SNAP) Program which reviews and approves use of alternatives which do not present a substantially greater risk to public health and the environment than the substances they replace or than other available substances. SNAP provides lists of acceptable and unacceptable substitutes in the following sectors:

- ✓ Fire suppressants,
- ✓ Aerosol solvents and propellants,
- ✓ Refrigeration & air conditioning, and
- ✓ Adhesives & coatings.

Alternative Fuel Vehicles and Alternative Fuels

Title III of the Energy Policy Act of 1992 defines alternative fuel vehicles and alternative fuels. This program was developed to help reduce petroleum consumption. Alternative fuel vehicles (AFV) are defined as any dedicated, flexible-fuel, or dual fuel vehicle designed to operate on at least one alternative fuel. The widespread use of alternative fuels is critical to reducing dependence on foreign oil, and improving air quality.

- Examples of Alternative Fuels:
 - ✓ Bio-diesel and Ethanol (E85),
 - ✓ Electricity,
 - ✓ Hydrogen and Compressed Natural Gas (CNG),
 - ✓ Methanol, and
 - ✓ Propane (liquefied petroleum gas).

Non-Toxic and Less Toxic

Executive Order 13693 mandates that 95% of all new contract actions require products that are non-toxic or less toxic than traditional alternatives, where products and services meet performance requirements.

- Examples of Less Toxic Product Categories:
 - ✓ Paints,
 - ✓ Herbicides,
 - ✓ Cleaners, and
 - ✓ Pest Controls.

Green Procurement Resources

ABILITY ONE is a federal procurement program which employees handicapped persons. UNICOR is a federal procurement program, which employees members of the Federal Prison Industries.

Green Procurement Training

Green Procurement Training is available at the following EPA website.

http://www.energyworkshops.org/Green_Purchasing_Training/

APPENDIX L

RECYCLING CENTER

Qualified Recycling Program (QRP)

401 KAR 48 AND 49 and FORT KNOX REGULATION 200-2

The Qualified Recycle Program (QRP) was fully implemented on 1 October 2010. The transition to the QRP began in March 2010. At that time the program moved from operational control of Directorate of Family, Morale, and Recreation (DFMWR) to the Directorate of Public Works (DPW), Environmental Management Division - Qualified Recycle Branch.

The QRP is a critical component of the installation's Integrated Solid Waste Management Program. The mission of the program is to minimize the amount of waste discarded in the landfill; save natural resources; increase the percentage of waste that is recycled; support the Army's Green Procurement policies; expand the education program with a focus on public awareness in support of recycling and comply with Army regulations.

Currently, all Department of Defense facilities must divert 60% of their solid waste and 60% of construction/debris from the landfill. By 2015, all federal agencies must divert 60% of non-hazardous solid waste and 60% of construction debris from the landfill. The goal is to increase diversion of compostable and organic materials from the waste stream.

References and Fort Knox Regulations:

- Executive Order 13423, "Strengthening the Federal Environmental, Energy and Transportation Management", 24 January 2007
- Executive Order 13693, "Federal Leadership in Environment, Energy and Economic Performance", October 9, 2009
- 10 USC Section 2577 – disposal of recyclable materials
- DOD Directive 4715.1E, 17 March 2005, Environmental, Safety, and Occupational Health (ESOH)
- DOD Instruction 4715.4, 18 June 1996, Pollution Prevention
- Fort Knox Recycling Policy-Memo

PURPOSE: The purpose of QRP is to implement an installation-wide recycle regulation and to direct who will recycle, how to recycle, where to recycle and what is recycled. The Fort Knox Recycling Regulation can be reviewed at this website.

<http://www.knox.army.mil/Garrison/dhr/asd/docs/regs/R200-2.pdf>

SCOPE: This regulation applies to all service members, civilians, private entities, contractors, and partners assigned to, visiting and/or conducting any form of business or recreational activity on Fort Knox. This policy includes all mobilization and demobilization activities as well.

This regulation is effective upon signature and will remain in effect until superseded or rescinded. This regulation will be permanently posted on unit bulletin boards. Point of contact for this policy is the

ENVIRONMENTAL HANDBOOK Issue 016 Ver. 01

Chief, Qualified Recycle Branch, Environmental Management Division at 502-624-5673 or the Chief, Environmental Management Division at 502-624-6684.

Participation in the Fort Knox Recycling Program is a requirement, not an option. Everyone who lives, serves or works on Fort Knox is responsible for recycling. Waste Minimization and Pollution prevention are fundamental components of Fort Knox's overall environmental policy. Recycling materials, which would otherwise be disposed of as waste, saves the installation money, and saves the environment. **REMEMBER: REDUCE, REUSE, AND RECYCLE!**

The Fort Knox Qualified Recycling Program Center, Environmental Management Division, Directorate of Public Works is the lead organization for the Fort Knox recycling program. Point of contact for this policy is Chief, Qualified Recycle Branch of the Environmental Management Division at 502-624-5673.

ORP OPERATIONS

The Fort Knox Qualified Recycle Center is located at Building 2962, Frazier Road. A recycling drop-off site is located in the Post Exchange Parking Lot near the Commissary. It is open 24 hours/day, 7 days/week.

RECYCLABLE MATERIALS

Materials Recycled/Reused	Method Used	Areas and Facilities Served
PAPER PRODUCTS All office paper Computer paper Copy paper (no carbon) Envelopes Newspaper & Advertisements Magazines Phone books Paper bags	QRP Recycle Center (recycle)	Curbside pickup and installation-wide drop off
DRINK AND FOOD CONTAINERS Aluminum foil and trays Glass bottles and jars (clear and brown) Tin, steel, and aluminum cans Plastic bottles (#1 through #7) Plastic grocery bags	QRP Recycle Center (recycle)	Curbside pickup and installation-wide drop off
PRINTER CARTRIDGES Ink jet cartridges (in original boxes) Toner cartridges (in original boxes)	QRP Recycle Center (recycle)	Office pickup or drop off

ENVIRONMENTAL HANDBOOK Issue 016 Ver. 01

Materials Recycled/Reused	Method Used	Areas and Facilities Served
OTHER MATERIALS		
Construction and Demolition Debris (includes concrete, bricks, steel, and other C&D material)	Recycled or reused through DPW, Housing, U.S. Army Corps of Engineers, JOC, DMWR, and Contractors	Per job
Contaminated Fuels	QRP Recycle Center (recycle)	Unit/activities turn-in by appointment
Excess property (furniture & appliances) (non- DRMS)	QRP Recycle Center (auction for reuse)	Installation-wide
Excess serviceable hazardous materials	Fort Knox HMCC (free issue program)	Units/activities turn-in (HMCC customers)
Government lead-acid battery (Some batteries may go to HMCC)	QRP Recycle Center (recycle)	Drop off only
Old corrugated cardboard	QRP Recycle Center (recycle)	Installation-wide collection or drop off
Scrap lumber (non- laminated)	QRP Recycle Center (reuse or recycle)	Drop off only
Scrap metal (includes steel, copper and brass)	QRP Recycle Center (recycle)	Installation-wide collection or drop off
Small arms brass	QRP Recycle Center (recycle)	Collected at the Ammo supply point (MASA)
USED ANTIFREEZE		
Used antifreeze (5 gallons or less)	QRP Recycle Center (recycle)	Unit/activities turn-in to QRP
Used antifreeze (55 gallon and larger)	QRP Recycle Center (recycle)	Unit/activities contact QRP for vendor pickup
USED OIL		
Used oil (5 gallons or less)	QRP Recycle Center (recycle)	Unit/activities turn-in to QRP
Used oil;(55 gallons or larger)	QRP Recycle Center (recycle)	Unit/activities contact QRP for vendor pickup
Used Filters	Boatwright Maintenance Area (recycle)	Unit/activities turn-in
White Goods	QRP Recycle Center (recycle)	Installation-wide
Wood pallets (untreated)	QRP Recycle Center (reuse or recycle)	Installation-wide collection or drop off

KNOX HILLS

Knox Hills shall continue the procedure for the issue and replacement of household recycle containers to all occupants of family quarters on Fort Knox. Funding for the purchase of containers is the responsibility of Knox Hills.

DEFENSE REUTILIZATION AND MARKETING SERVICES (DRMS) DRMS will:

- Provide technical advice and assistance;
- Ensure proceeds from the sale of all recyclable materials sold through LRC are returned to the Fort Knox QRP Budget Clearing Account in an expeditious manner.

PUBLIC AFFAIRS OFFICE (PAO)

PAO will provide program assistance by publishing advertisement and articles in all forms of media. Coordination will be made with DPW.

ALL ORGANIZATIONS, UNITS AND ACTIVITIES ON FORT KNOX

Each commander will be responsible for ensuring that their waste producing activities are evaluated to determine those that are essential and those that are not. Waste audit assistance is available through the DPW QRP. Based upon this evaluation, commanders will implement waste stream reduction procedures. Examples of waste stream reductions are:

- Ensure proper supply discipline practices are followed; use routing slips instead of multiple copies; when possible, make copies on both sides of paper; where appropriate and use electronic filing.
- Use reusable products such as ceramic coffee cups and glasses; maintain and repair durable products; reuse containers and other items.

Each commander will appoint a Recycle Coordinator (Environmental Officer) for his or her unit. The QRP will be provided with a memorandum appointing the unit recycle coordinator, giving name, rank, office symbol, e-mail address and telephone number. With the aid of the QRP, these coordinators will implement a mandatory recycle program within their unit and will appoint building monitors or points of contact (POC) for each building. The collection contractor will issue exterior recycling containers and locks upon request.

Cleanliness of recycle containers and surrounding areas is the responsibility of the building POC. When more than one unit occupies a building, the responsibility for recycle monitoring will fall to the unit hand receipt holder for the building.

All appointed Environmental Officers (EOs) for units, directorates, private entities, partners and contractors on Fort Knox will adhere to this section of the Handbook.

COMPLIANCE

The DPW inspector will perform compliance inspection by spot checking dumpsters. Compliance will also be part of Inspector General (IG) and environmental inspections.

- First offense - the building POC will be notified.

- Second offense - a memorandum will be sent to the Commander/Director from the Garrison Commander.

SEPARATION/TURN-IN PROCEDURES FOR ORP

OFFICES

All office recyclables should be separated by category (e.g. paper, aluminum cans, plastic 1-7 and bags, toner and ink jet cartridges) and processed through the Fort Knox QRP. Proper separation procedures are as follows: all paper products in one bag; plastic and cans in one bag; toner Cartridges and ink jets in original boxes. The POC may coordinate periodic pick up or delivery with the collection contractor.

SUPPLY FUNCTIONS AND MAINTENANCE FACILITIES

Old Corrugated Cardboard (OCC)

Clean, brown paper bags and most packing paper (not newspaper) may be mixed with OCC. Plastic or wax coated OCC or OCC that is contaminated with food particles or petroleum products is NOT recyclable and should NOT be mixed with other OCC. Outdoor metal containers are available from the collection contractor for the collection and storage of recyclable OCC. All OCC shall be broken down to conserve space in collection containers. The POC may coordinate periodic pick up or delivery by contacting the Recycle Center.

Wooden Pallets

Any standard wooden pallet, even one with broken boards that still may be used as a pallet, is recyclable. Pallets so broken as to be unusable as a pallet should also be disposed of through the QRP for shredding and sale. Units may withdraw pallets from the QRP as needed. The POC may coordinate periodic pick up or delivery with the collection contractor. Generators of 10 or more pallets per week may make arrangements for scheduled pick-ups.

FOOD PREPARATION FACILITIES

Old Corrugated Cardboard (OCC)

Clean, brown paper bags and most packing paper (not newspaper) may be mixed with OCC. Plastic or wax coated OCC or OCC that is contaminated with food particles is NOT

recyclable and should NOT be mixed with other OCC. Outdoor, metal containers are available from the collection contractor. All OCC shall be broken down to conserve space in collection containers.

GOVERNMENT QUARTERS OCCUPANTS

Residents of government quarters should contact their local community office for recycling guidance and requirements.

Historic Community: 502-799-6560
Chestnut Glen Community: 502-799-6580
UPH Community: 502-799-6582

Dietz Community: 502-799-6570
Van Voorhis Community: 502-799-6590
Executive Homes: 502-799-6501

ITEMS TURNED-IN TO DEFENSE REUTILIZATION AND MARKETING SERVICES (DRMS)

Definition of recyclable material that may not be recycled through the QRP

If the material is not required for disposal through higher priority programs such as re-utilization, transfer, donation, foreign military sales, precious metals recovery, strategic and critical materials stockpile, used military vehicles, military vehicle or machine parts and electrical components, it should be recycled through the QRP. Also, discarded materials which must undergo demilitarization or mutilation before sale, strategic list items and munitions list items (Small arms brass and mixed metals gleaned from firing range cleanup) must be turned-in to Military Ammunitions Supply Area (MASA) not recyclable through the QRP.

All other types of scrap material may be turned in to QRP.

DRMS Disposition Services Knox Turn-in procedures

All supply activities taking items to DRMS which might later be declared as scrap will ensure documents indicate that the derived funds are to be deposited to the Recycling Budget Clearing Account, DAO, Fort Knox, Kentucky. Failure to provide recycling information to DRMS will result in the proceeds not returning to the Fort Knox community.

APPENDIX M

SPILL PREVENTION AND EMERGENCY RESPONSE PROCEDURES

(Emergency Preparedness and Response) **40CFR112, KY Division of Water Regulations,** **AR200-1, EPCRA and OSHA 29 CFR 1910**

The purpose of this Section is to provide guidance for the safe and effective response to spills or releases. All spills or releases must be reported on EMD form, Spill Incident Report found in Appendix D. Spills can be hazardous and non-hazardous. You must be properly trained to handle a hazardous spill.

SPILL PREVENTION

The first course of action in spill prevention is preventive maintenance. The EO must ensure that:

- All containers, 55 gallons or larger are in secondary containment (covered if outside) or that containers are double walled;
- Containers are in good condition (not rusting or damaged);
- Adequate spill supplies are in the immediate area where a spill might occur and available (**DO NOT LOCK SPILL MATERIALS UP**);
- Emergency Spill Response Procedures and phone numbers are prominently posted (see poster below);
- Emergency phone numbers are posted close to telephones;
- Inspections are performed in a timely manner;
- Spill training is conducted for Unit personnel and available from EMD;
- Post a spill response poster available from EMD.

If a spill occurs, “Have a Plan.” Make a Contingency Plan/Standard Operating Procedure (SOP). Spill Contingency Plan forms are available from EMD. Proper advance planning is the smart, easy way to help reduce the risk of injury to workers and reduce potential damage to the environment.

POST YOUR SPILL CONTINGENCY PLAN/OR EMERGENCY NOTIFICATION PROCEDURE IN A VISIBLE LOCATION

- Post an emergency notification placard or Spill Contingency Plan on the building door(s).
- Make an inventory of all liquids on site and post your inventory for accessibility.
- List the quantity of each liquid at each location.
- Identify “high risk” or “spill prone” areas.
- Record the maximum (worst-case) quantities of liquids which could potentially spill at each location.
- Keep updated Safety Data Sheets (SDS) for all liquids at each location.
- Make sure you are trained on your appropriate SDSs and understand what chemicals you are dealing with in usage and in spills.

- Select the correct type of kit and clean up accessories, based on the type of liquid in each area and the information on the SDS.
- Plan routes for best access to each location, allowing for all determining factors, such as the weather, traffic, and work activities.
- Maintain kits and clean-up accessories to be sure they are fully useable and available.

SPILL TYPE **REMEMBER ALL SPILLS ARE REPORTABLE**

Fort Knox categorizes spills into three separate types:

Incidental

An incidental spill is a non-hazardous substance or POL that poses no threat to the safety or health of persons or to the environment. Typically, these are spills inside/outside a building that can be immediately cleaned up and are basically a result of routine housekeeping actions (i.e. the spill of a small amount of motor oil on a maintenance shop floor as a result of an oil change). Any spill that is reportable under environmental regulations will not be classified by Fort Knox EMD as incidental.

Significant – CALL FOR HELP - 911 Range 502-624-2125

A significant spill is one that has the potential to threaten the environment, but no injuries have occurred, has not reached a waterway (but could), does not pose a safety or health hazard (such as fire, explosion, or hazardous material exposure), and can be absorbed, neutralized, or otherwise controlled at the time of release by personnel in the immediate spill area.

Major – CALL FOR HELP – 911 Range 502-624-2125

A major spill is one of such nature as to pose a definite threat to the environment and/or the health or safety of persons in and around the area of release. A major spill would be characterized by any of the following.

- Injuries have occurred
- Any spill into a waterway
- Poses significant safety or health hazards (such as fire, explosion, or hazardous material exposure)
- It cannot be absorbed, neutralized, or otherwise controlled at the time of release by personnel in the immediate release area

SPILL RESPONSE AND REPORTING

Regardless of where a spill or release occurs (motor pool, range, etc.); any unit or individual observing a spill or release of a POL product or hazardous substance shall immediately notify the Facility Manager (FM) or Officer in Charge (OIC) and the EO. If the spill is a significant or major release, it is to be reported to the Fire Department and EMD immediately. **CALL 911.** Spills must be reported immediately and cleaned up as soon as practical, without risk of injury or significant exposure to personnel. Assess the risk. Determine if the spill is a threat to human health and/or to the environment.

For spills that are **incidental or significant:**

- Notify the appropriate personnel and agencies (FM/OIC, EMD, & Fire Dept.).
- Select the appropriate personal protective equipment.
- Confine the spill.
- Stop the source.

- Evaluate the incident and initiate cleanup.
- Containerize the spilled material and contaminated soil. Decontaminate personnel responding to the spill.
- Complete required reports.

For spills that are **major**:

- Notify the appropriate personnel and agencies with the appropriate information (FM/OIC, EMD, & Fire Dept.).
- Evacuate the area if necessary.

For spills that have entered a waterway place booms downstream to contain the pollutant or place or construct diversions to prevent the spill from entering a waterway or manhole.

- Wait for emergency response personnel (FKFD Incident Commander) to arrive.

SPILL RESPONSE AND REPORTING

The Environmental Management Division and the Fire Department are available 24 hours a day, 7 days a week for spill or release response. After 1700 on weekdays and on weekends, EMD can be reached through the DPW Work Order Section. See Appendix P for Work Order instructions. Information required for oral reporting is outlined on the **SPILL INCIDENT REPORT found in Appendix D**. The following telephone numbers should be used for reporting spills or releases:

FIRE DEPARTMENT		911
		502-624-6016/1876
ENVIRONMENTAL MANAGEMENT DIVISION (EMD)		502-624-3629/4654
WORK ORDER SECTION, DPW	(EMERGENCIES ONLY)	502-624-1171/4246
MILITARY POLICE	Emergency Only	911
	Routine	502-624-2111/2112
IOC OFFICER		502-624-2707
RANGE CONTROL		502-624-2125/1447

The EMD is responsible for reporting any reportable releases or spills occurring on the installation to state, federal and local agencies; therefore, it is essential to report timely information involving a spill. EMD personnel are trained in spill reporting and are available for assistance for spill response or other environmental guidance.

SPILL RESPONSE IN TRAINING AREAS

Spill equipment and materials are required on ranges and training areas. All units are required to have the capability to immediately capture and contain a predetermined amount of **100 gallons of POL** product released by their unit. The following list of equipment and materials is required for all units using training areas on the Fort Knox installation.

- A commercial spill kit designed for absorbing POL products
- Containers to place contaminated spill absorbent material – 55-gal drums w/lids or equivalent
- An appropriate supply of oil absorbent material to respond to a release of 100 gallons of POL Product

- Enough shovels, brooms and picks to sweep, dig up and/or build a berm to contain a spill of 100 gallons
- A supply of plastic sheeting to cover a spill area of approximately 200 square feet
- A sufficient number of drip pads to place under any leaking vehicles
- A supply of plastic bags for contaminated oil absorbent
- The spill equipment and materials must be readily available for quick access; and, therefore, must be stored near or on the training site.

Commercial spill kits are available from Ability One or through private companies and vary in size. The size of the spill kit required on-site is dependent on the type of equipment used in the training exercise. Replacement materials for the kits are available through the same sources. The responsibility for replenishing the supply of exhausted materials is the responsibility of the individual unit.

All units should maintain a sufficient supply of spill absorbent materials and equipment to fulfill their particular needs and support their mission. All contaminated materials are to be disposed of at the Fort Knox Landfill.

Range Division will instruct all units of their responsibility for spill response and reporting prior to allowing them to use training areas during Range Briefings. The following response procedures should be adhered to:

IMMEDIATELY REPORT THE SPILL TO:

- Range Division,
- The Fort Knox Fire Department,
- The Fort Knox Environmental Management Division, and
- **Follow the Spill Prevention and Emergency Response Procedures noted above.**

Range Control will maintain a back-up supply of Spill Response Materials to allow units to continue training if the unit has exhausted their own supply of materials. In order to minimize retrieval time, these materials are strategically located at Yano Range, Cedar Creek Range, and St. Vith, etc. If units use spill supplies from Range Control they must reimburse Range Control for the cost of these items.

APPENDIX N
STORM WATER/GROUNDWATER POLLUTION
PREVENTION PLAN (SWGPP)/BEST
MANAGEMENT PLAN (BMP)
Kentucky Regulations 401 KAR 4, 5 and 10 and KPDES

The regulatory requirements for the Storm Water/Groundwater Pollution Prevention and Best Management Plan (SWGPP/BMP) are designed to prevent the pollution of the surface waters and groundwater resources of the Commonwealth of Kentucky. This primary SWGPP/BMP covers all activities, units, and tenants at Fort Knox having a requirement for a SWGPP/BMP plan. Each activity, unit or tenant will have a site specific plan relevant to the site activities. The SWGPP/BMP provides compliance with the terms and conditions of the KPDES permit.

This SWGPP/BMP Plan is intended to:

- Identify sources of potentially polluting materials and industrial activities that could contaminate storm water and groundwater.
- Identify non-structural and structural controls to be used at the source to prevent significant pollutant materials from entering the watershed.
- Provide the installation with Best Management Practices (BMP) and controls to manage and/or eliminate contaminated water discharges.
- Develop an inspection schedule to ensure all practices are in place and functioning properly.
- Develop and implement a schedule for employee training and awareness programs for spill response, and material-handling practices.

The SWGPP/BMP Plan describes and evaluates the potential pollution sources and significant materials at each facility. These sources include material loading and unloading areas, other material handling operations, significant materials storage, outdoor manufacturing and process activities, solid waste disposal, hazardous waste management practices, maintenance and cleaning operations, and areas of past spills or leaks.

Facility/Site Assessment Phase

- Develop Individual Facility Site Maps
- Inventory and Describe Exposed Materials
- Conduct a Risk Assessment for Potential Spills
 - The Risk Assessments are rated using a scale of “Low”, “Moderate”, and “High”
- List Significant Spills and Leaks
- Test for Non-Storm Water Discharges
- Evaluate Monitoring Data
- Summarize Pollutant Sources and Risks

- List Immediate BMPS and Advanced BMPs

As required by the KPDES permit the BMP details the Best Management Practices to be used in conjunction with the SWGPP.

Best Management Practices (BMPs) Requirements includes,

- BMP Committee
- Reporting of BMP Incidents (SPILLS)
- Risk Identification and Assessment
- Employee Training
- Inspections and Records
- Preventive Maintenance
- Good Housekeeping
- Materials Compatibility
- Security
- Materials Inventory

The BMPs are included in many of the operational controls throughout the Fort Knox Handbook, and are an important monthly compliance activity. The Storm Water Inspections and Reporting Forms are located in Appendix D.

Additional KPDES permit requirements includes,

- Hazardous Waste Management (including solid waste)
- Modification (site/facility changes)
- Periodically Discharge Wastewaters Not Specifically Covered by Effluent Conditions

BASE LINE BEST MANAGEMENT PRACTICES (BMPs)

Fort Knox KPDES Permit

SWGPP/BMP Committee

This committee is made up of EMD personnel who oversee the SWGPP/BMP. This information is available at EMD from the SWGPP/BMP Program Manager.

Reporting of BMP Incidents (SPILLS)

- ✓ Spill Prevention Control and Countermeasures Plan (SPCCP) (provided by EMD) requires that;
 - your spill control procedure (SCP form) is posted,
 - you have spill kits available,
 - your Potential Polluting Materials (PPMs) are protected from storm water,
 - you have a current inventory of PPMs,
 - all PPMs are properly labeled, and
 - a copy of the Spill Incident Report is available for reporting spills.

NOTE: The appropriate SPCCP plan will be referenced in the site SWGPP/BMP. The SPCCP provides specific spill reporting procedures and pertinent information relevant to the possible area of contamination created from a spill.

Risk Identification and Assessment

- ✓ Each site plan will have the following information identified on the map.
 - BSC Container Location with Volume
 - HAZMAT Storage Sheds
 - Other bulk storage units (55 gallon drums)
 - Flow direction
 - Runoff receiving waterways

Employee Training

- ✓ Appropriate site personnel are trained on the following,
 - Stormwater inspection requirements
 - Spill reporting
 - Spill cleanup
 - Managing spill kit materials, and
 - Fuel handlers annual training

Inspections and Records (Maintain for 5 years)

- ✓ Inspections and records will include the following,
 - Monthly Stormwater Inspections
 - Monthly Bulk Storage Container Inspections
 - Monthly HAZMAT Storage
- ✓ Visual Inspections
 - Look for oil surfaces
 - Plugged drains
 - Flow direction – particularly after a rainfall event
 - Water clarity – clear or dirty
 - Stains on concrete, gravel or grass

Preventive Maintenance - General

- ✓ your site specific SWGPP/BMP must be up-to-date and on file (both electronic and hard copy),
- ✓ you are using drip **PADS** under leaking vehicles
- ✓ your oil filter presses are operating properly
- ✓ you are changing fluids in the authorized areas, and
- ✓ erosion and sediment controls are in place

Preventive Maintenance for Sediment and Erosion Control

- ✓ Sediment accumulation will be reported to EMD
- ✓ Eroded areas
 - Contact EMD

- Submit a request for repair work (see **Appendix P**) to repair,
 - Grassy ditches and spillways
 - Concrete lined ditches/spillways and piping

Preventive Maintenance for the Management of **Stormwater Runoff**

- ✓ Runoff management includes
 - Water reuse for irrigation
 - Increased filtering materials to reduce sediment
 - Inlet controls and detention devices (settling basins)

Preventative Maintenance for **Fuel Points** will have the following:

- ✓ drip **PANS** under fueling point
- ✓ spill cleanup equipment on hand, and
- ✓ all automatic shutoffs on fuel pumps are working properly.

Good housekeeping requires that you;

- ✓ have clean and organized areas
- ✓ post and use your inspection schedule, and
- ✓ ensure that Oil Water Separators (OWS) have a clean discharge to stormwater if applicable

Materials Compatibility

Compatible materials are stored correctly in HAZMAT sheds, outbuildings, and Flammable Cabinets, and incompatible materials are not stored together.

Security

HAZMAT sheds are locked when not in use. All security fence gates are locked after hours or when the site is closed.

Materials Inventory

Each site will have a materials inventory of all stored materials to determine the potential contamination sources from associated runoff. The inventory will include HAZMAT storage facilities, scrap metal, wood pallets, trash/recycle dumpsters (roll-offs) bulk storage containers, and any other materials that may have the potential to create runoff contaminants.

Hazardous Waste Management

The management of solid and hazardous waste will be in accordance with the regulations promulgated under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1978 (RCRA) (40U.S.C. 6901 et seq.). The SWGPP/BMP will include practices required under RCRA regulations and the Fort Knox Solid Waste Plan.

Modification

Site plans will be modified whenever there is a change in the facility or change in the operation of the facility which materially increases the potential for the ancillary activities to result in the release of potential pollutants.

Periodically Discharge Wastewaters Not Specifically Covered by Effluent Conditions

Procedures and controls are in place necessary for the handling of periodically discharged wastewaters such as intake screen backwash, meter calibration, fire protection, hydrostatic testing water, and water associated with demolition/construction projects.

STORMWATER WORK/SERVICE ORDERS

Refer to Appendix P for instructions on placing work or service orders.

APPENDIX O

SOLID WASTE MANAGEMENT

401 KAR 48 AND 49, AND FORT KNOX REGULATION 200-2

The purpose of this Integrated Solid Waste Management Plan (ISWMP) is to define and document Fort Knox's current solid waste management program and meet the requirements of Army Regulation 420-1. The plan outlines goals, recommends strategies, defines roles and responsibilities, and emphasizes the use of the integrated solid waste management hierarchy of source reduction, recycling and reuse, treatment and disposal to maintain compliance and cost-effectively achieve solid waste minimization and diversion goals and supports the goals of the Fort Knox Environmental Management System (EMS).

Integrated solid waste management reflects the United States Environmental Protection Agency's pollution prevention hierarchy, which includes (in preferential order) source reduction, recycling, treatment, and disposal. This integrated solid waste management plan (ISWMP) addresses each of these components by:

- Identifying source reduction measures that may be used to reduce the waste stream;
- Defining the various elements of the waste stream and identifying the avenues of reuse, recycling or disposal for each;
- Documenting correct procedures for all aspects of solid waste management including storage, collection, segregation, transportation, treatment, recycling, and disposal;
- Presenting factors potentially affecting solid waste management and listing alternatives and contingency plans for future consideration; and,
- Assigning responsibilities and tasks to installation personnel for the effective execution of the solid waste program.

The decisions involved in solid waste management today are diverse and far reaching:

- Will recycling generate revenues or cost the installation money?
- Which recyclables should be included in the recycling program?
- How can the installation best meet Department of Defense (DOD) diversion goals for nonhazardous solid waste and construction and demolition waste?
- How can the installation motivate its personnel to recycle and implement source reduction practices?
- How can green procurement (GP) practices be used to minimize waste generation?

Integrated Solid Waste Management

Solid waste, as defined in the Resource Conservation and Recovery Act (RCRA), is any garbage, refuse, sludge, or other discarded material resulting from industrial, commercial, institutional, and residential activity. Discarded materials include those that are disposed of, abandoned, recycled, or are inherently waste-like. Hazardous wastes are solid wastes that meet specific RCRA or state

criteria involving hazardous characteristics or the presence of listed constituents. For the purposes of this Integrated Solid Waste Management Plan (ISWMP), hazardous wastes are not included.

Integrated solid waste management (ISWM) is a comprehensive, hierarchical approach to managing solid waste that incorporates a variety of solid waste management practices to safely and effectively handle the non-hazardous solid waste stream. The hierarchical approach means that source reduction is the first preferred method for managing solid waste, then recycling, and lastly the disposal of solid waste. The goal of the ISWM approach is to use combinations of these methods to safely and effectively manage non-hazardous solid waste.

Purpose

The purpose of the Fort Knox ISWMP is to:

- Define and document the installation's current solid waste management program;
- Set goals for improving solid waste management through source reduction and Affirmative Procurement (AP);
- Specify the strategies and responsibilities for achieving those goals; and,
- Meet the Army requirement to develop an ISWMP in accordance with Army Regulation (AR) 420-1.

Program Objectives

The objectives of the Fort Knox integrated solid waste management program are to:

- Comply with applicable Federal, State, local, and Army solid waste management (SWM) regulations.
- Achieve waste reductions goals (diversion rates for construction debris and general trash) set by the Army, DOD, Federal government, and respective state governments.
- Characterize the types and amounts of solid waste (including non-regulated or special wastes, potential recyclables, and construction debris) based on information obtained using standardized data collection procedures.
- Describe the storage, collection, transportation, and disposal for each category of solid waste identified.
- Demonstrate that alternate disposal mechanisms have been identified and evaluated prior to the selection of the preferred disposal method.
- Evaluate future disposal options based on changes in waste generation, governing regulations, and/or the availability of regional disposal facilities.
- Assess recycling and composting programs and identify ways to improve these programs.
- Identifying Green Procurement practices that reduce waste and conserve resources.

Plan Organization

The Fort Knox ISWMP follows the framework for developing a complete and effective ISWMP in accordance with AR 420-1 and as set forth in the United States Army Center for Health Promotion and Preventive Medicine (USACHPPM) Technical Guide (TG) 197, Guide for Developing Integrated Solid Waste Management Plans at Army Installations (November 2013).

Responsibilities

Integrated Solid Waste Management (ISWM) at Fort Knox requires the involvement of a number of directorates, activities, and organizations in order to have an effective ISWM program.

Fort Knox Landfill

The Fort Knox Construction/Demolition Debris (CD/D) Landfill is operated and maintained by the Fort Knox solid waste management contractor. The contractor operates the landfill in accordance with AR 420-47, EPA 40 CFR 241, Kentucky Solid Waste Management Regulation

401 KAR 48:060, and other applicable regulations. The policies and procedures for the operation of the CD/D landfill are contained in solid waste management contract.

Fort Knox Landfill Permit Number 047-00008. This permit was issued by the Kentucky Natural Resources and Environmental Protection Cabinet, Department for Environmental Protection, Division of Waste Management to Fort Knox, KY for the construction/operation of the Construction/Demolition Debris Landfill.

APPENDIX P

WORK/SERVICE ORDERS

DPW operates the work/service order program. It is imperative that you follow the correct process for requesting a work/service order. Following the correct process will ensure your request is properly handled and meets all Fort Knox standards and regulatory mandates.

DPW's Process for Work / Service Orders.

Non-Emergency (Priority 2 and 3) Do not submit these on DA Form 4283.

1. Please remember a service order is maintenance/repair/replacement of any real property.
2. On all Service Order request emails, please use the following format:
Building #/Room #:
Issue:
POC Name:
Contact Number:
Customer ID:
3. Email your request to: usarmy.knox.imcom-atlantic.mbx.dpw-work-orders@mail.mil

Emergency (Priority 1)

1. Priority 1 requests must involve **life, health or safety**.
2. Priority 1s should be called in to 502-624-1171.

Individual Job Order (IJO)

1. IJOs are submitted for any new work or construction. These require the submission of a DA Form 4283.

Completed Work/Service Orders

When the work is completed, the technician has to get a signature. Please ensure the person signing off on the work knows what he/she (POC) is doing. Often someone (non-POC) will sign off on the work because no one else is around, and either the wrong work is done or the POC is never notified that the work has been done.

Work/Service Order Duplication

Please make sure everyone in your unit is aware of what requests are being submitted. Duplicate requests happen regularly and it does nothing but slow things down.

NOTE: Do not call Trane for Heating & Air Conditioning issues. These must go through DPW.

NOTE: Work/Service Order requests for **Stormwater and or Bulk Storage Container repairs** must be copied to EMD at this email: army.knox.emd@mail.mil

APPENDIX Q

ACRONYMS

<u>Acronyms</u>	
ACHP	Advisory Council on Historic Preservation
ACM	Asbestos Containing Materials
AAFES	Army and Air Force Exchange Service
AFV	Airborne Fighting Vehicle
AR	Army Regulation
ARPA	Archaeological Resources Protection Act
ASA (I&E)	Assistance Secretary of the Army – Installation and Environments
ASCCs	Army Service Component Commands
AST	Aboveground Storage Tank
AUL	Authorized Use List
BMP	Best Management Practice
BOD	Biological Oxygen Demand
BSC	Bulk Storage Container
CAA	Clean Air Act
CARC	Chemical Agent Resistant Coating
CD/D	Construction/Demolition Debris
CE	Commander’s Evaluation
CFC	Chlorofluorocarbon
CFR	Code of Federal Regulation
CO	Command Officer
COD	Chemical Oxygen Demand
COMA	Covered Outdoor Maintenance Area
CSC	Covered Secondary Containment
CSM	Command Sergeant Major
CWA	Clean Water Act
CX	Categorical Exclusions
DA	Department of Army
DAO	Division Ammunition Officer
DDs	Decision Documents
DeCA	Defense Commissary Agency
DFMWR	Directorate of Family, Morale, Welfare and Recreation
DOD	Department of Defense
DOD-HM	Department of Defense Hazardous Materials
DOT	Department of Transportation
DPTMS	Directorate of Plans, Training, Mobilization and Security
DPW	Directorate of Public Works
DRMS	Defense Reutilization and Marketing Services
DRU	Direct Reporting Units
EA	Environmental Assessment
EO	Environmental Officer
EIS	Environmental Impact Statement
EMD	Environmental Management Division
EMS	Environmental Management System
EO	Executive Order

ENVIRONMENTAL HANDBOOK Issue 016 Ver. 01

EPA	Environmental Protection Agency
EPAS	Environmental Performance Assessment System
EPCRA	Emergency Planning and Community Right-to-Know Act
EQCC	Environmental Quality Control Committee
EQCS	Environmental Quality Control Subcommittee
ESMP	Endangered Species Management Plan
FGS	Final Governing Standards
FHP	Force Health Protection
FM	Facility Manager
FRHO	Fire Resistant Hydraulic Oil
FRM	Flameless Rations Heaters
GC	Garrison Command
GHS	Globally Harmonized System
GIS	Geographic Information System
GOV	Government Owned Vehicle
GPC	Government Purchase Card
GPP	Ground Water Protection Plan
HMCB	Hazardous Materials Control Board
HMMC	Hazardous Materials Management Center
HQDA	Headquarters Department of Army
HMCC	Hazardous Materials Control Center
HMMP	Hazardous Materials Management Program
HMMS	Hazardous Materials Management System
HW	Hazardous Waste
IACH	Ireland Army Community Hospital
IAW	In Accordance With
IBP	Industrial Base Planning
ICAP	Installation Corrective Action Plan
ICUZ	Installation Compatible Use Zone
IG	Inspector General
IMCOM	US Army Installation Management Command
IMPAC	International Merchant Purchase Authorization Card
INRMPs	Integrated Natural Resource Management Plans
IOC	Installation Operation Center
ISSA	Installation Services Support Agreement
ISO	International Standard Organization
ITAM	Integrated Training Area Management
JALS-EL	US Army Legal Services
KAR	Kentucky Administrative Regulation
KPDES	Kentucky Pollutant Discharge Elimination System
KRS	Kentucky Revised Statutes
LEC	Law Enforcement Command
LEED	Leadership in Energy Environmental Design
LRAM	Land Rehabilitation and Maintenance
LRC	Logistics Readiness Center
MACOM	Major Army Command
MASA	Military Ammunitions Supply Area
MEO	Miscellaneous Environmental Officer
METL	Mission Essential Task List
MOI	Memorandum of Instruction
MOS	Military Occupation Series
MVAC	Motor Vehicle Air Conditioning

ENVIRONMENTAL HANDBOOK Issue 016 Ver. 01

NAGPRA	Native American Graves Protection and Repatriation Act
NBC	Nuclear-Biological-Chemical Weapons
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NGB-ARNG	National Guard Bureau-US Army National Guard
NH3	Ammonia
NHPA	National Historic Preservation Act
OCC	Old Corrugated Cardboard
ODEP	Office of the Director of Environmental Programs
OIC	Officer in Charge
OP	Over Pack
OSC	On-Scene Coordinator
OWS	Oil Water Separator
OHSA	Occupation Health and Safety Administration
OPORDs	Operations Orders
P2	Pollution Prevention
PAO	Public Affairs Office
POC	Point of Contact
POL	Petroleum, Oils & Lubricants
POV	Personally Owned Vehicle
PPE	Personal Protective Equipment
PPM	Potential Polluting Materials
QRP	Qualified Recycling Program
R & U	Repair and Utilities
RCRA	Resource Conservation and Recovery Act
ROA	Reports of Availability
ROD	Record of Decision
RTLA	Range and Training Land Assessment
SAP	Satellite Accumulation Point
SARSS	Standard Army Retail Supply System
SCP	Spill Contingency Plan
SDS	Safety Data Sheet
SHPO	State Historic Preservation Office
SJA	Staff Judge Advocate
SMC	Senior Mission Command
SME	Subject Matter Expert
SOP	Standard Operating Procedure
SPCCP	Spill Prevention, Control and Countermeasures Plan
SPP	Standard Practices and Procedures
SRA	Sustainable Range Awareness
SSA	Supply Support Activity
SRP	Army's Sustainable Range Program
SWPP	Storm Water Pollution Prevention
TES	Threatened and Endangered Species
TLC	The Logistic Company
TRI	Training Requirements Integration
TRC/RAB	Technical Review Committee/Restoration Advisory Board
TSCA	Toxic Substance Control Act
TSO	Turbo Shaft Oil
TSS	Total Suspended Solids
TV	Tactical Vehicle
UWCA	Universal Waste Collection Area

ENVIRONMENTAL HANDBOOK Issue 016 Ver. 01

UEC
 UN
 US
 USAEC
 UST
 WOS
 WWTP
 XO

Unit Environmental Coordinator
 United Nations
 United States
 US Army Environmental Command
 Underground Storage Tank
 Work Order Section
 Waste Water Treatment Plant
 Executive Officer

REVISIONS

Date	Change Description	Page Number
December 2009	General review and update	All pages
December 2010	Commander's Remarks Revised, all operational controls updated as needed/sections added for clean air, noise, solid waste and storm water.	All pages
May 2012	Complete revision of the handbook.	All pages
December 2013	Complete revision of the handbook.	All pages
December 2014	Complete revision of the handbook	All pages
December 2015	Complete revision of the handbook	All pages

Be

Sustainable



Policy *
Prevent Pollution
Comply with Law
Continual Improvement